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THE ANCIENT FORTS OF IRELAND: BEING A CONTRIBUTION TOWARDS OUR KNOWLEDGE OF THEIR TYPES, AFFINITIES, AND STRUCTURAL FEATURES.

BY THOMAS JOHNSON WESTROPP, M.A.

(PLATES LII. TO LIX.)

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XIV.

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[Read April 22, 1901.]

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I.—Introductory.

It was with the greatest diffidence that I ventured to lay before the Royal Irish Academy an attempt to deal with so large and complex a subject as is offered to antiquaries by the ancient forts of Ireland. To deal with it minutely could only be possible after many careful workers had described the chief forts of their respective districts; to deal with it

exhaustively would imply an amount of systematic exploration and excavation all over Ireland which has only been attempted imperfectly, and, as a rule, unscientifically, in a few districts. It was therefore in no spirit of confidence that I approached this task.

A study of many forts of our principal types in various parts of Ireland for over twenty years, and a careful examination of rich districts along the Atlantic seaboard (while showing how vast is the subject, and how little qualified I am to deal with it in its broadest aspects), shows how necessary it is that a definite beginning and some generalisation should be attempted in the hope that a new century may raise a school of students willing to devote themselves to a heavy but important task—a task not yielding popular applause, but invaluable for the right understanding of our records. Readers will, I hope, forgive the so far personal nature of this preface.

We will endeavour to set out the results accumulated, hoping that others may start from our goal with wider experience, and, above all, wider knowledge of the remains of "Celtic" forts on the continent of Europe, which form the preface to the story of the Irish forts, which preface nearly all our antiquaries have left unread. Meanwhile we may hope that the little band of workers in this harvest may be encouraged to continue (with additional volunteers) the unthanked labour of publishing detailed descriptions with plans and illustrations, and still more the systematic excavation and exploration of the forts, the only sound bases for fuller treatment of the subject. Two more points we may note, first, that this Paper does not pretend to describe or to utilise all even of the more interesting forts in Ireland; secondly, that it avoids ethnological speculation as much as possible, and uses the term 'Celtic' as a mere symbol for the types prevailing in Ireland. Many forts of these types were most probably constructed by tribes to which even the loosest users of the term would never think of applying the word 'Celtic.' It is impossible to divest one's self or one's Paper of all theory, but this Paper is intended to collect results, and not to advocate any theory of our own.*

* We also use the term 'fort' for a defensive (not necessarily a military) enclosure, and 'prehistoric' simply for an unrecorded early time, even if technically within the historic period of Ireland. For the convenience of brief citation, we may note here that R.I.A. refers to the Royal Irish Academy; R.S.A.I. to the Royal Society of Antiquaries of Ireland, under its various names,

The forts of earth cannot be separated in this inquiry from those of stone; their plans are identical, and their periods are usually contemporaneous; the favourite view that the earthen forts are the earliest is contradicted by our records which mention, for example, the making of an ordinary rath in the reign of Donough Cairbreach O'Brien who died in A.D. 1242. We cannot dare to fix, even provisionally, periods for the various styles of masonry. We have heard it alleged that the rude stonework preceded the "Cyclopean," but have seen it resting on top of the latter at more than one fort; finer "Cyclopean" work than any in our forts occurs in our early churches. Hammer-work occurs on dolmens as well as on forts, and "finds" are most equivocal; therefore we cannot but feel that the time has not even dawned for advancing our "certainty" to this degree.

The stonework depends altogether on the nature of the rock in the district and the facilities for removing the same; similarly the occurrence of earth and stone forts depends largely on the nature of the country. Where stone and earth are abundant, we find forts of both materials; occasionally a rampart of stone had been built upon or among earthworks, or a stone revetment built to form a face to the earthen mound, or a fosse and earthwork made outside the actual defence of a wall. In shale districts, stone forts are rare, but rock-cut fosses and stone-faced ramparts are not uncommon. In rocky districts, even where earth abounds, the earth-fort is exceptional; and who would have used anything but stone at any period in the uplands of Burren or the Isles of Aran? Everywhere we see the mark of the geological division, and nowhere the mark of the tribal or racial district in the treatment of material. The motes of Louth and Hungary, or the cahers of Burren and Bosnia, are closer akin than are the stone fort of Cahercalla and the mote of Magh Adhair lying close to and in sight of each other.

1. **Types and Plans.**—The types of the forts are best based on the plans, for (as we have pointed out) the construction depended on physical

"The Kilkenny Society," "The Royal Historical and Archæological Association of Ireland," &c.; Dunraven, "Notes on Irish Architecture," by Lord Dunraven. The absence of consecutive numbers in the earlier volumes of the above Societies leads us to give the year in brackets. O. S. is the Ordnance Survey.

considerations, while the plans of forts, whether of earth or stone, whether with or without timber, are strikingly similar in most parts of central Europe and our Islands.

(*a*) The simplest type is the enclosure, circular or oval, of the ring-mound or ring-wall; variants of this type have two or more walls, or earthworks and fosses, up to five, and possibly up to seven rings.* The triple enclosure has been alleged in Ireland to be the mark of a royal fort, but, if so, why have the undoubtedly "royal" forts of Caher Crofinn, and Rath Laoghaire at Tara, Emania, Rathcroghan, and Bealboruma not got this distinctive mark? In a few cases the fort is protected by an abattis or *chevaux-de-frise* of standing stones, a ring of large blocks, or an obstacle of loose stones. The first-named very interesting feature is rare; it occurs at Dun Aenghus, Dubh Cathair, and Ballykinvarga in Aran and Clare, Dunnamoe in Mayo, Pen Caer Helen in Wales, Cademuir and Dreva in Scotland; it is found as lines of pillars at Castel Coz in Brittany, at Laufen in Switzerland, and at the Bauerberge on Möhne in the Baltic. Apart from these peculiarities, the type of fort is very widespread, occurring in Thessaly, Bosnia-Herzegovina, Austria, Germany, Holland, and Belgium, Sweden, the Islands of the Baltic, Switzerland, France, and the British Isles. Two forts are frequently conjoined; a good example occurs at Tara in the Forradh and Teach Cormaic. Others occur in at least fourteen counties. In Carlow, Longfield, Tipperary, and Mullacreevagh, Westmeath, we find examples of three conjoined raths.

* "Demon chariot of Cuchullin" (Journ. R.S.A.I., ser. iv., vol. i., p. 385?):—"Dun Sciath . . . seven walls about that Cathair, hateful was the fort." Dindsenchas of Grianan Aileach, "Dun to which led horse-roads through five ramparts," Book of Lecan, p. 255. The principal triple-walled forts are Dun Aenghus, Cahercommaun, Cahercalla (Quin), and Moghane; The Treduma Nesi of Tara has vanished. Grianan Aileach and Dunbeg have a wall and four (? five) earthworks. Cahercrofinn (Tara), Emania; Baltinglass, Rathgal, and Rathangan (Wicklow); a rath near Pucks Castle (Dublin), Cashel (Cork); Dun Oghil (Aran), and a caher near Tuam (Galway); Glenquin, Cahergurraun, Caheragaleagh, and Cahershaughnessy, in Clare, have two distinct ring enclosures. Dun Conor and Langough have only side annexes. "Cormac's Glossary" mentions the triple fort of Crimthan more mac Fidach (Dun Treduc), near "Glastonbury of the Irish," and other three ringed forts are named in the "Book of Rights," and poems of Seanchan.

(*b*) The walled island or stone crannoge is rare but widespread; it in no way differs from the ordinary stone forts, except in being as a rule less massive. It is found in the lakes of Skannive and Bola, near Carna in Connemara; in the turlough or temporary lake of Castletown, Clare (Cahersavane); in Lough Corrib, at Illauncarbery, Galway; in Lough na Crannagh, on Fair Head, Antrim; in Kerry, and elsewhere. The earthen fort on piling is well represented by Dungorkin in Londonderry. The subject of wooden crannoges lies outside the scope of this paper.

(*c*) The rock-fort is also closely akin to the ring-forts. Fine examples are found at the Giant's Sconce, in Londonderry, Dunbought in Antrim, and Cahercashlaun and Cashlaun Gar in Clare: the latter must have been reached by a ladder.

(*d*) The rectangular or straight-walled type is, save in plan, identical with the ring-fort in every respect. There is not even the certainty (though there is probability) that it is later, for Bronze-Age antiquities have been found in Continental examples. These forts occur in nearly every county of Ireland, but are by far the most abundant in the southern counties of Leinster, Kilkenny having at least twenty-eight such forts, and Wexford fifty-five, while we seldom find more than six or eight in other counties. Some have double fosses and earthworks. One of the finest examples of a dry-stone straight-walled fort, is Caherwalsh, near Noughaval in Clare, where three similar enclosures also remain. Large ones remain at Ballybritt in King's County, and also in Cork, Galway, Louth, Roscommon, and Kildare. They occur along with dolmens and pillar-stones in Cork and Clare, and enclose early slab-enclosures for houses in the latter county.

(*e*) A second type, for want of a better name, we may call a promontory fort,* using this term, not only for sea-surrounded headlands, but for spurs on hillsides. This fortification may consist of a wall, with or

* We omit the "Mediterranean" examples, as the general force of evidence seems to point rather to northern Europe as the main route by which fort-plans and ornament reached Ireland. The formation of a promontory fort is too obvious to require any tradition or knowledge of older buildings in its makers. To call our Irish promontory forts "Mediterranean" would be perhaps a *suggestio falsi* like the popular term "Danish forts" in Ireland, or "Huns forts" in central Europe.

without a fosse or fosses, or simply of one or more earthworks and fosses. The defence usually presents a convex curve to the land side; it is sometimes straight, but probably never externally concave. This type occurs in Greece and elsewhere round the Mediterranean; and is found in Dalmatia, at Rugen in the Baltic, in Switzerland, France, and the British Isles. Among the finest examples, we may note Castel Coz (wall, earthworks, and abattis) in Finisterre; Rathbury Castle (three fosses and a rampart), Scotland; St. David's Head (three walls), Wales; St. Mary (stone walls and two mounds and fosses), Scilly Isles; and the Worle Hill (seven fosses and a protection of loose stones) near Weston-super-mare. In Ireland, perhaps the most interesting groups are those of some seven forts along the more eastern coast of Waterford; the great forts of Dunmore and Dunbeg, besides three others at the south-western angle of Corcaguiny in Kerry; the group of forts from Dun Fiachra to Dunnamoe, at the N.W. angle of Mayo; the Black Fort on Aran, and Dundoillroe in Clare, are also worthy of mention, but the former has been extensively rebuilt. These sites have frequently been refortified in late mediæval times; it must suffice to mention the Old Head of Kinsale, Ferriter's Castle in Kerry, and Dunlecky Castle in Clare. The most interesting example of a fort on an inland spur is Caherconree (wall and slight earthwork) in Kerry. A very accessible though defaced example of a headland fort remains in the so-called Dun Criffan at Howth. Nennius mentions "promontoria" among the forts of Britain; and the Irish version* translates the word 'cathair'; they were possibly forts of the Dunbeg type, but the term may, perhaps, include ringed hill-forts as well.

(*f*) Another most widespread type is the mote, a simple flat-topped mound, sometimes with a fosse and earth-ring round the base. Very few examples occur to the west of the Shannon and Lough Neagh, while they are especially plentiful in the centre and north of Leinster. They are occasionally sepulchral, and in some cases have been used both for defence and burial. They occur (leaving out sepulchral tumuli) in France, Denmark, Germany, and Austria, and are extremely common in England.†

* "The Irish Nennius," p. 29.

† Many English motes are undoubtedly of Saxon and some even of Norman times. Perhaps

Some out of the many fine Irish examples may be named, as Clane in Kildare, Slane in Meath, and Rahue in King's County. The mound of Magh Adhair in Clare is more notable for its use and history, and its exceptional position in a moteless district, than for its size. It and several motes in Meath have the fosse, earthwork, and sloping "gangway," which, as Dr. Christison points out, are vividly depicted in the representation of an attack on the palisaded "Dun" of Dinan shown in the Bayeux tapestry. Some of the larger motes have platforms and even slight terraces, such as those of Granard in Longford, and Clones in Monaghan. A fine example (perhaps of Scandinavian origin) stood close to Trinity College, in Dublin, and was long known as the Thing Mote.

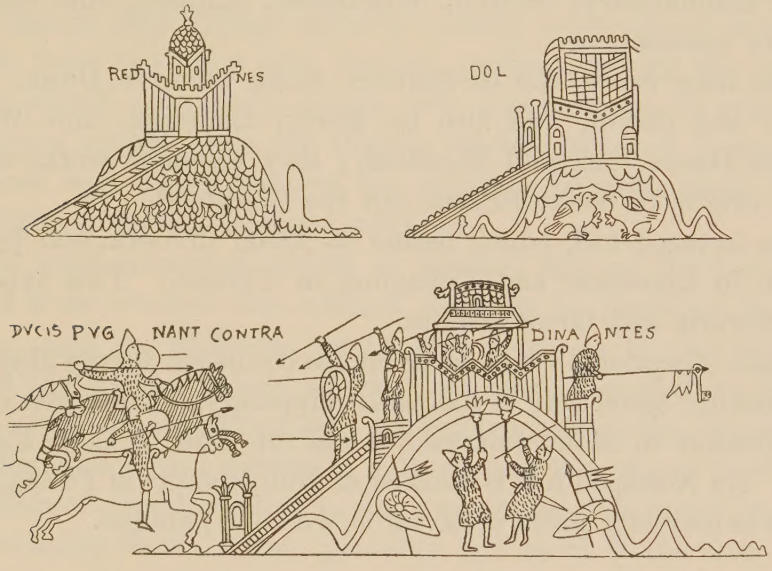

FIG. 1.—Forts (Motes) shown in Bayeux Tapestry, Rennes; Dol; and the attack on Dinan.

(*g*) A very interesting variant of the last type is the mote with an annexe or platform separated from, and lower than, the mound; this may be irregularly square, fan-shaped, round, or crescent-shaped; such occur

some Irish motes may be as late, but apart from other questions the mention in our Annals of Downpatrick, A.D. 495, Donaghpatrick, A.D. 745, and of Knockgraffan, and probably Kilfinnane, as residences of the King of Cashel, by the Book of Rights (at latest ninth century, possibly fifth) shows that some motes were of early and possibly prehi storic date.

outside our islands in Hungary and Prussia. Borlase suggests that they are the structures alluded to by Tacitus as "castra ac spatia," while Virchow considers that they may have been temples. The more definite traditions in Ireland regard them as places of assembly, "parliament houses," and places for "duels or tournaments," but similar legends are attached to ring forts. The finest Irish examples of this type are the regal Rathceltchair at Downpatrick; the great motes of Newry (Crown Mound) and Dromore in the same county; Derver and Donaghpatrick in Meath; Greenmount in Louth; Kilfeakle, Dunohill, Knockgraffan, and Tipperary in Tipperary; Kilfinnane in Limerick, and Lismore in Waterford. They lie mainly in two groups, but scattered examples are found in Londonderry, Antrim, Westmeath, Kildare, and the eastern seaboard of Leinster.

(*h*) The long fosses and earthworks which occur in Down, Armagh, Longford, and Cavan, and also in Kerry, Limerick, and Waterford, such as the Danes' Cast and Duncladh; they resemble works of Roman and other origin, in Great Britain and the Continent.

(*i*) The terraced hill, which occurs at Doon in Cork, and perhaps at Kilbradran in Limerick* and Tullaghog in Tyrone. This type is also found in Etruria and Great Britain.

(*k*) Some exceptional types occur on the Ordnance Survey Maps. Such as the somewhat spiral fort at Ashpark, Tipperary,† which has congeners at Bryn Derwer in Montgomeryshire, and the Dun of Loch Feochan in Scotland. An X-shaped fort is marked at Mullymeskar in Fermanagh, and if the plan is correctly given is (so far as we know) unique.

2. **Number of Forts.**—It is hard, if not impossible, to state (even in the merest approximation) the number of forts in Ireland. Even the forts which are marked on the maps are so numerous that only by a long though intermittent toil, spread over many years, can we offer a number which claims to be even approximately correct. Meanwhile it is certain that in some counties, knowledge of field antiquities might add several hundred sites to those marked, even on the maps of the great Ordnance Survey of

* Fig. No. 23. † Fig. No. 19.

6 inches to the mile. Over and above this field list are numerous townlands and other places, with names implying the former existence of forts not now marked on the maps. Then we find in our older records, many forts named at places now without any trace of fort name or remains. Taking into account all these omissions, we may, with little fear of exaggeration, place the number of forts in Ireland at about thirty thousand, for the maps mark some 28,800 in all Ireland, 4283 being in Ulster; 4651 in Leinster, 7593 in Connaught, and 12,232 in Munster. So imperfect, variant, and conventional are the methods adopted for marking these forts on the older survey, and so lost are the forts in many cases among the modern enclosures on the maps of the more accurately detailed survey now in progress, that without actually visiting every site, it is impossible to compile from the maps any detailed census, showing the number of ring-walls, ringed earthworks, square forts, simple motes, or even in many cases, complex motes, while the slightly marked traces of fosses on headlands, whose very names suggest the existence of promontory forts, are too often ignored by the practical surveyor.

In this most important object of detailed lists of the various types of forts, it is too evident that reliance can only be placed on antiquarian field-work; and so, while we avoid statements as to the approximate number of the various classes of forts, we may state that we have been careful to verify our assertions as to the existence of certain types, but that their predominance in a district is only an assertion of our mere opinion. We have lists of over forty simple, and twenty complex motes, and of over sixty promontory forts. These probably fall short of the true numbers. Of the number of the other types, we dare offer no definite statements.

The numbers of forts approximately is as follows:—The average number of acres to each fort, in various counties, is given in brackets to show the comparative number, the latter proportional statement must be taken with caution, as the forts lie much together on the more fertile ground, avoiding, save in Kerry and Clare, the wilder mountain districts and boglands:—

ULSTER.—Antrim, 618 (1261 acres); Down, 664 (921 a.); Armagh, 190 (8726 a.); Monaghan 706 (452 a.); Cavan, 909 (525 a.); Fermanagh, 397 (1147 a.); Tyrone, 393 (2051 a); Londonderry, 189 (2728 a.); Donegal, 215 (5550 a.).

LEINSTER.—Louth, 146 (1390 acres); Meath, 545 (1061 a.); Westmeath, 1184 (383 a.), Longford, 653 (412 a.); King's County, 265 (1870 a.); Queen's County, 251 (1690 a.); Kildare

185 (2310 a.); Dublin, 58 (3905 a.); Wicklow, 225 (2223 a.); Carlow, 178 (1243 a.); Kilkenny, 627 (813 a.); Wexford, 334 (1725 a.).

CONNAUGHT.—Leitrim, 536 (732 acres); Sligo, 1472 (327 a.), Col. Wood-Martin, however, gives 1800 Sligo forts; Mayo, 2147 (637 a.); Roscommon, 1276 (471 a.); Galway, 2162 (775a.).

MUNSTER.—Clare, 2419 (343 acres); Kerry, 1988 (596 a.); Limerick, 2147 (317 a.); Tipperary, 2244 (427 a.); Waterford, 510 (923 a.); Cork, 2930 (630 a.).

Sligo and Limerick head the list, and the Munster and Connaught counties have nowhere less than 1 fort to 1000 acres. Donegal is lowest, 1 fort to 5550 acres. Dublin, the next lowest in appearance, has evidently lost the greater number of its forts through cultivation and the spread of the suburbs, whose very names, Rathmines, Rathgar, Rathfarnham, Bagotrath, Raheny, &c., tell of the former demolition of raths. Col. Wood-Martin computes the number of Irish forts as 40,000, *i.e.* as about 32 times the number in Sligo, but the number in each county is variant.

The richest proportion to the poorest (Sligo to Donegal) is as 1 to 17. Most of these forts are from 100 to 130 feet in diameter; a considerable number are from 300 feet to 360 feet across; but very few exceed 500 feet across. The largest earthen ring-forts are Dorsey, a mile long, and Dun Ailinn in Kildare, 1600 by 1350 feet. The largest stone forts are Moghane in Clare, 1500 by 1100 feet, and Dun Aenghus in Aran, 1000 by 650 feet.

3. **Fort Names (General).**—It is of no little interest to note the names by which these structures are known from the far east of Europe to the Atlantic. Pre-eminent in extension and interest is the word 'Dun,' probably meaning 'strong.'* It obtained the derivative meanings of 'stronghold' or 'hill-fort.' Its cognate 'ton' ('town') lies outside the scope of our subject. To save our readers a search in Ptolemy, Cæsar, and other ancient authors, we may note that the place-names with this compound spread from Ireland to the mouth of the Danube. The "Celts" of those early ages round the opening of our era used it as a suffix (as they did Magus, Magh, and Nemetum, Nemed), instead of as a prefix as in Ireland.

Among the names of the first century, B.C. and its two successors, we may note—in *Ireland*: Dounon. *Britain*: Axellodunum, Branadunum, Cambodunum, Camulodunum (Maldon?), Dunion, Londinium (London), Margidun, Maridunum (Caer-Marthen), Rigodunum, Segedunum, Serduno, Sorbiodunum (Sarum). *Spain* (only at north-west angle): Caladunum. *France*: such semi-Roman names as Augustodunum, Cæsarodunum, and Celtic names as Laudunum, Lugdunum

* Zeuss, p. 30: see "Irish Names of Places," Dr. P. W. Joyce (1871 ed.), p. 267.

(Lyons), Segodunum, and Uxellodunum, among the Aquitani: Lugdunum, Melodunum (Melun), Noviodunum, and Virodunum (Verdun), among the Belgi. Noviodunum among the Celti; and Eburodunum in Provence. In *Switzerland* are found Eburodunum, Minnodunum, Noviodunum (Nyon), and Salodunum. In "*Germany*": Carrodunum, Eburodunum, Lugidunum (and the tribe of Lygoduni near Bresslau), Meliodunum, Segodunum, and Taurodunum. Cambodunum was in *Rhætia;* Noviodunum (Isaktcha near the mouth of the Danube, and Singidunum (Belgrade) in *Mœsia*, and Viodunum in the present Roumania. It will be noted that these do not cover all the districts in which the "Celtic" forts occur, as the remains extend to Esthonia and Sweden, but this may arise from the natural ignorance of the more northern districts among the writers of the Empire.

"Duna" is found in Hungary, but seems there to be a local form of the river name (Duna = Danube), though one name lies far from the great river, and another, Duna Földvar, is actually combined with an accepted fort term. Similarly, "Duna" is found as a river and town name in Esthonia, where "Celtic" forts are also found. Its use in Ireland and Scotland is too common to call for note. And in France, it is probably present in Dinan (where a large mote existed at the time of Harold's ill-starred sojourn at the court of his future enemy, William of Normandy), and the names of some other towns, such as Dun le palleteau, Dun sur Meuse, Verdun, and Dun le roi. Lis, Les, and Leis, in the sense of "court," occur in place-names in Brittany.

In Ireland, however, "Dun" is not of such frequent occurrence as Lis and Rath. It would be a vast and not very profitable task to extract all the fort-names on the O.S. maps; but taking the townland names, we find that "Lis" leads by a vast majority as a prefix to 1400 names, "Rath" and "Dun" come next in order with 597 and 576, and "Caher" heads 315 names. The criterion is deceptive, for there are some 140 "Caher" names in Clare alone, though only 50 give names to the townlands, and over 50 lost "Caher" names are also recoverable from the records of that one county. Professor Sullivan states that, out of 244 Caher names in Ireland, Cork, Kerry, Limerick, Clare, and Galway have 209; but this is manifestly unreliable. The name certainly is most abundant in Munster, Galway, and Southern Mayo; and it is found in Queen's County (Cahernacappol's House, and Caher), Meath (Caher Crofinn), Longford (Caherdigue), and Antrim (Caher Righ). The word, probably in early

Christian times, came into use, for "doons" as well as for enclosed monasteries. The change has left its mark in the double names, Caermarthen (Caher mari dun) and Caterthun (Cathair dun) in Great Britain, and the names "Caherdoon" in Ireland. The love for a double name has, since 1878, even begun to assert itself in Aran, where the Black Fort or Dubh Cathair is getting re-named, "Dun doo 'hair."* In our literature, the word is frequently equated with "city."

North of Clew Bay, "caher" is replaced by "cashel." This word co-exists along with "caher" southward, even to Cork, and has acquired a subsidiary meaning of "wall of a monastery." "Cashlaun" is a rarer form. "Ooan," "Moher," and "Dangan" sometimes mean "caher," but local knowledge is required to distinguish these from natural caves or late enclosures or castles. The Dindsenchas uses both "cashlaun" and "Moher" for the Grianan of Aileach. "Boen" (or bawn) occurs in Kerry, Cork, and (it is alleged) Clare; but we believe in the last case it is a misread "Ooan." "Mote," and "Longfort" are loan words. "Pallis" is a peculiar term given to over 40 townlands, but (so far as we can recall) only given to two rectangular forts in Westmeath and Kerry. "Durlas" (or strong fort) occurs, notably at Thurles. Tonnach or Sonnach is also used for a ring-wall or enclosure.

The curious reduplications like "caherdoon" are also found in combinations of other fort-words—Caherlis, Cahercashlaun, Lisdoon, Lisnaraha, Lisdangan, Rathdangan, Lissatunna, Lissamota, Dunalis, Dunluce (Dun Liss), and Lismoher. Such names as Cahermore, Lismore, Cahereen, Lisheen, and Cahermoyle have almost ceased to be proper names.

The terms used in other countries may be briefly enumerated. Only one commends itself for our use in this country, the admirable Germanic term "ring-wall."

In Bosnia-Herzegovina these "Celtic" forts are named "Hausberg," "Burgwälle," "Wällburg," and "Ringwälle." In Bohemia: "Hraditsch" and "Arad" (equated with "rath" by W. Borlase) are found. In Hungary the forts are "Duna," "Hring," "Poganvyar" (heathens' walls), "Földvyar" (field or earthen-walls), and "Devils-ditch." In Esthonia: "Bauerberge"

* Perhaps, however, this is the name rendered "Doonaghard," as on O. S. Maps. We give the phonetic form, as used in 1895.

and the name "Daingen" occurs. In Germany: "Ringwall," "Wallburg," "Heidenschanze" (heathen fort), "Spiel Hugel" (place of games). In the Vosges: we find "Heidenmauer" (heathen walls) and "Altschloss" (old fort). In Holland: "Hune schans" (Huns' fort). In Switzerland: "Ringberg"; and in France: such names as "Cæsar's camp,' "Roman camp," "Castel," "Mur," "Camp of Attila," and "Pagan Castle," recalling the Irish term "Danish fort." In the British Isles, we have "Dun," "Caer," "Rath" (Pembroke, Northumberland, and Scotland), "Birren," "Ringknowe," and "Law." In Scotland: "Liss," "Beacon," "Ring," "Devil's hedge," "Mote," "Dyke," and many other terms.

4. **Fort Names (Individual).**—If we seem to some to intrude on linguistic questions in this section, we must only crave the patience of such readers to bear with what we conceive as necessary (in the system adopted) to the fuller treatment of our forts, and as being an interesting branch of the folk-lore concerning them.

The ideas of size and colour (as might be expected) have supplied a long list of names to the forts. We find many times and in many counties such names as Cahermore, Caherbeg, Cahereen, and even (probably)* Cahereenmore; Lismore, Lisbeg, Lisheen; Rathmore, Rathbeg, Raheen; Doonmore, Doonbeg, Dooneen; but such names are of little interest, and virtually non-descriptive.

Lime was probably used as a pigment long before it was used for mortar; but, in some cases, the white colour attributed to the forts is rather due to the limestone blocks, bleached with the rain and storm of many centuries. Such names occur as Cahergel (borne by two important stone forts in Galway and Kerry), Caherbane, and Caherlea, Dungal, Lisbaun, Lisheenbane, Lisgal, Lislea, Rathbaun, and Rabane.

The dark stone or earth, or in some cases a shady hillside, originated such names as Caherduff, Lisdoo, Lisduff, and Raheenduff. Red or yellow earth (or the green-sward which forms so lovely a feature in many earth forts) gave names like Lisderg, Lisroe, Lisbuy or Lisglass, Lisheenroe, Lisheenbuy, Dunderg or Dunroe, Rathduff or Rathglass, or the fort was "speckled" with various colours, and called Caherbreac or Lisbrack.

For their position, or other peculiarities various forts were called Caherard, Rathard or Lissard, Dundrum or Rathdrum, Lisnaknock or Knockadoon.

* *Transactions* Royal Irish Academy, vol. xxxi., p. 301.

Cahernageeha, Lisnageeha, and Rathnageeha derived their names from their breezy station (like Ilium of old), while Caherrush and Cahersaul suggest at once the lonely headlands on which they stood, beside the breakers of the Atlantic. Caherlough actually overlooks a reedy lake; Caherass and Doonass overhung the rapids of the Maigue and Shannon. The fort was cut out of a gravel mound, and named Rathescar, or lay in marly bogland, or low ground, with water in its trenches, and became Caherloghan, Lisaniska, Raheenaniska or Rathdoorus. It was flat-topped, or much levelled, and people named it Cahermoyle, Lismoyle, or Rathmoyle. From its shape a fort was named Caherleane, Cahergar or Caherfadda, Lisgar or Lisleane, Rathgar or Rathfad.

The fort finally got superseded by more convenient residences, and the inhabitants only kept their domestic animals in it; naming it Lisnabo, Lisboduff, Lisbofinn, Liscappul, Cahernagree, Lisnagry, Doonagore, Rathnagore, Caherminaun or Lisnaminaun, Lisnamolt, Lisnamuck or Cahernamuck. In other cases, as at the present day, its owners cultivated the garth, and it got named Rathnapish or Lissacurkia, "jam seges est ubi Troja fuit." It was sometimes deserted, and the gallows was set on its height, then it got the ill-omened name of Lisnacroghera; or it was used for burial, and became Cahercaltragh or Lisnagorp. In some cases, in its utter loneliness, people fancied that it had become the haunt of evil spirits; the "corpse candle" was seen in its fosse, and it was named Lisnagunniel; the ghost and phuca cried in its desolate houses, and the shuddering peasantry called it Lisananima, Lissaphuca, Caheraphuca or Lisheenvicknaheeha, "the little fort of the son of the night."*

More real were the "doleful creatures"—the wild cat, badger, and wolf—that haunted it, and it was called Cahernamactiere (now Cahermackateer, in Clare), Rathbreffy, Lisnapeasty, Lisnabrock or Cahernagat, or it was overgrown, the oak, ash, or holly springing from its ruins, the ivy cloaking its walls, while the doves cooed (as in the poem on O'Roigh's fort) above the lonely site, and then it got for its name Caheraderry, Cahercullenagh, Lisnahinshin, Duneena, Cahereinagh, or Cahernagollum.

The personal names connected with the forts are much more difficult to

* "Macnahaidche" occurs however as a personal name, e.g. *Annals of Ulster*, 1104–1150 and 1281.

deal with, and it is impossible to know whether in any case they may record the name of the builder. In Doon Innees (the traditional name of Dun Aenghus) and Dooneerish (the traditional name of Caherdoonfergus) we find the names Aenghus and Irghus, which appear in the oldest legends of the places; but few such names can be traced behind the Norman Invasion, and fewer beyond the Danish wars. The numerous fort names in the "Book of Rights" are for the most part lost. The three forts in the "Battle of Ventry," and the forts in the legend of Moytura-Cong, are now forgotten on the sites. Such names as Caher Power, Caher Rice, and Caher Sayers tell of late dates, and are not found in the Survey of 1655. "Le Rayth," near Dublin, became "Moenes-Rath," and eventually Rathmines, after the English Settlement. The fort called by DuNoyer, Cahermactireach, and by Windele, Cahermartinigh, is now Caherconor, and its name, Cahernamairtineach, has been transferred to a neighbouring fort, which was called Caherdonnell fifty years ago. The Ordnance Survey maps have restored not a few of the old names to use. The "Grenans" of Aileach and Lachtna had lost their epithets; the forts at Tara had lost their distinctive names. The son of Niall of the Nine Hostages is said to have given his name to Dun Leary; but the name of Rath Laoghaire was forgotten at Tara. Names like Cahermacclanchy, Cahershaughnessy, and Caherdermotygreefa, Rathfarnham, and Bagotrath are evidently late; other names have been misapplied, as Dun Criffan at Howth, which, if the ancient account in the Dindsenchas* be correct, was visible from Meath, and, therefore, probably stood on the "Doon Hill," and not on the headland hidden from Meath. It is, however, pleasing to find the names of Maeve and Cuchullin, Balor and Lon mac Liomhtha; the Firbolgs, Ferdia, Aenghus, Irghus, Conor, Adhar, and, perhaps, Mod and Beara, Curoi mac Daire, Finn and Ossian, Dermot and Grania, clinging by tradition to some of our forts, even though the names are but shadows.

II.—Forts of the Irish Types in other Countries.

Not long ago any attempt to equate the forts of Ireland with those of Greece—to see analogies between the citadels of "gold-abounding Mycenæ"

* "Dindsenchas, *Revue Celtique*" (1894), p. 290.

and the well-walled Tiryns" on the one hand, and the forts of Aenghus, Conor, or Irghus, on the other—would have been adversely judged, and the bold writer covered with ridicule. Now, despite the dislike of a decreasing band of adherents to the old views, the likeness is acknowledged, and the connexion, or rather the descent, of the Bronze-Age art of Greece and Ireland seems fairly well established. Strange it is that early legends (whether by a happy guess or otherwise) attributed the colonization of our island to tribes advancing from Greece or the neighbourhood of the Euxine; and, stranger still, that some warrant should be found in the stern archæology of facts for this fairyland of far tradition. Ever westward pressed swarms of settlers along the lines of the Baltic and the Danube, and right across their track passed the trade in jet and amber from Greece to the Baltic. We can readily see in those facts an unbroken chain of possible connexion; and when the chain of ruined forts (of the same types as are found in Ireland) extends without a break from Thessaly and Bosnia through Hungary, Prussia, the Low Countries, France, Switzerland, and the British Isles, we can hardly fail to draw the only apparent conclusion. In our wish to avoid mere theory, we do not intend to go into the question of Etruscan fortresses, which probably (like the northern forts) go back in origin to the same great centre—the city of the Lions' Gate; still less dare we do more than recall to our readers the more unanswerable problem of the far isolated group of great and pre-historic hill-forts on the hills of Mashonaland, and the earthworks of the Ohio, which, on a grander scale, show such very striking analogies to the forts of Ireland. These call for long and careful investigation; for the last words had not been said on the former question when the work of Vallancey, O'Brien, and Betham fell into disrepute, and the exponent of a theory in the great puzzle of Central Africa has yet to arise.*

One would be disposed to turn to Galatia to see whether any remains similar to our forts are to be found in that early "Gaulish" settlement; but though we find features like the corbelled passages of Irish forts and

* "The Mediterranean Race," p. 44, suggests a migration from inner Africa (Somaliland) to the Mediterranean, but the subject is at present too precarious to suggest any connexion with the Irish Forts.

low trilithic doorways in the fort of Pteria, we are compelled to equate them more directly with the Mycenæan than with the "Gaulish" period.*

Petrie, and not a few others of our older antiquaries, saw remarkable resemblances between Irish cahers† and the great fortresses of Greece and Etruria. Some only noted this without building much theory upon it; others made it the basis of elaborate inverted pyramids of conjecture; but none seem to have followed up the subject step by step to see whether there was any probable connexion traceable. We ventured with some doubt to indicate briefly and scantily how identical examples occurred from Ireland to Austria; and at the same time another member of the Academy, Mr. Coffey, was publishing a series of articles on early Irish ornamentation, which gave a clue to the manifestly Mycenæan influence in this early art. So it can be seen how easily suggestions for fort-building might have been carried across eastern Europe and up the Baltic on undoubted lines of intercourse between Mycenæ and the north, along which the trade in jet and amber had proceeded for centuries.‡ There these ideas rooted and produced forts of the Bronze Age in the Danube Valley, in Bosnia, Hungary, Bohemia, Germany, and Livonia, whence the westward movement of tribes and nations carried the designs into western Germany, Gaul, and the British Isles. Dr. Christison, Mr. Borlase, and Dr. Munro were at the same time publishing works which helped to weld the chain of facts from Ireland to the Euxine; and, in this light, the theories (such as that founded on the late legends of the sons of Huamore, which for fifty years had satisfied Irish antiquaries) appeared too weak and partial for future acceptance, sufficient for a county or two, insufficient for the forts of a continent, or even the 30,000 forts of Ireland.

5. **Greece.**—Commencing at the centre where, as we believe, lay the source of those traditions of art and building, which over a thousand years before our era flowed northward, and put their mark even on the rough

* Revue Archéologique, N.S., xxiii. (1872), p. 210.

† "Military Architecture of Ireland" (MSS. R.I.A.), pp. 116, 175.

‡ Professor W. Ridgeway points out ("Early Age of Greece," 1901, p. 359) that amber found in Mycenæ, Bosnia, and the Swiss Lake-dwellings is shown by analysis to be of Baltic, and not Mediterranean, origin.

tribes to the north of the Danube, we must briefly consider what structural phenomena akin to those of the Celtic forts are to be found in the citadels of Greece. Apart from countless similarities in weapons and ornaments, the great fortresses of Proetus and Agamemnon afford us features of building which, like the former objects, probably originated a school whose last disciples worked in Ireland two thousand years after the bright early dawn of Greek civilization had been over clouded. The Greek fortresses, though (with the exception of the Thessalian acropolis hereafter noted) very dissimilar in plan to the subjects of this essay, resembled the "Celtic" forts in girding the summits of knolls of rock. In Mycenæ is an "upright joint," a section of wall called a "tower," but not projecting, and only forming a revetment to the *débris* of ruined houses. The masonry is of very variant character in portions of the wall, and often resembles, on a larger scale, the masonry of Irish forts as our older antiquaries long since noted, though strangely oblivious of the greater size of the "Pelasgian" stone-work which befitted the wealthy and luxurious citizens of that wonderful civilization. The walls in some cases had dry filling of rude and small stones. The great trilithon of the Lion's Gate finds smaller analogies in Munster and Connaught. So do the springs outside the walls so contrary to the notions of modern and even of mediæval defensive work. The Greeks, like the Irish, defended against assault rather than blockade, for no siege in a modern sense took place (so far as we know) till long after the crops had grown above fallen Ilium. The more honoured dead were buried within a ring enclosure, the person who approached the gate of Tiryns had his unshielded side next the men on the wall; the great passage covered by corbelling in the rampart of the same acropolis had its shadow in Grianan Aileach and the Kerry forts; but this may be a mere resemblance, as no very exact analogy can be found in the forts of central Europe. The masonry was coursed, "cyclopean," or polygonal, and in some cases had spawls or packing pieces fitted in the interstices, and loose filling in the centre. Some Antiquaries consider the "cyclopean" work is later than the coursed, in fact not much earlier than 500 B.C. A circular building, which can scarcely be later than the year B.C. 700, has been found at Amorgos; and the great lake fortress of Ghâ or Arne

is reproduced in the little walled islets in the lakes of Scotland and Ireland.*

6. **Thessaly.**—There is an acropolis near Volo which Dr. Kirker, staff surgeon of H. M. S. *Amphion*, described in a letter published by his brother.† This fort closely resembles the Celtic type, as it seems to have consisted of two, if not three, concentric ring-walls round a limestone knoll. It lies three miles to the south of Volo, and near Cape Angistiri, and was not described in any book or known to any antiquary at Athens so far as Dr. Kirker could ascertain. The walls are built of heavy "cyclopean" masonry, which, from the nature of the rock, closely resembles some of our cahers, but is of larger blocks 7 to 8 feet long, and 2 feet by 3 or 4 feet in section. (In the Clare and Aran forts we have seldom found blocks exceeding 7 feet by 2 feet by 1 foot). The innermost ring utilised a precipitous crag as portion of its rampart; it is 150 feet in diameter; a radius wall, 19 feet thick and 180 yards long, runs to the outer ring in a north-westerly direction. Lower down the slope is a wall, a quadrant of the circle towards the west; a gateway lies to the south. The outer ring is also 19 feet wide, and 730 feet across the inner side. An outwork like that at Dun Aenghus and Dun Conor in Aran lies to the S.W. There is a double gate beside it.

7. **Dalmatia.**—We find one "promontory" stone fortress described as remaining on a peninsula near Sebennico; there is no trace of a gateway, and a holed-stone lies near the wall. The other points are not clearly defined, but it seems to have been a prehistoric structure.‡ Early hill forts, some of large blocks, are also found.

* We select these from a vast number of available works as Dr. Schliemann's "Mycenæ and Tiryns" and Dr. Tsountas (Ed. Dr. Manatt) "Mycenæan Age," p. 27 and p. 261, &c. Mr. George Coffey's valuable papers on the evolution of early Celtic ornaments may be found in the *Journal* R.S.A.I., 1894–1897.

† Journal of the Royal Society of Antiquaries of Ireland, XXIV., 1894, p. 271, S. K. Kirker. The plan is herewith reproduced, figure 2.

‡ "Land of the Bora," p. 56; see also "Dalmatia and Herzegovina," (S. J. G. Wilkinson, 1848).

8. **Bosnia-Herzegovina.**—Wallburgen and hill-forts of a kind closely resembling our lisses occur with tumuli and burials of the Bronze Age near Glasinac, an elevated upland; some 20,000 tumuli are found in groups of several hundred in twenty or thirty places; in a few instances cists occur, and also about twenty-three forts; usually one wallburg lies near each cemetery. The skeletons in the tumuli had, in some instances, their feet turned towards the fort. In Ireland, save at some motes in Wicklow, the cists in the majority of cases seem to be turned eastward without any regard to the forts which occur among them. In all probability the Bosnian forts and tumuli are contemporaneous, and the Irish forts are later than the cairns and cists.* Dr. Montelius considered the "finds" as dating from extremely early times to the fifth century, B.C. (1100–500 B.C.). Amber occurred among the ornaments, and southern influence was apparent in the bronze antiquities. Near Mostar is a district extremely rich in remains of the class with which we are concerned; among these we may note the great stone fort of Mala Gradina; on the hill above it is a large cairn. The fort is irregular in plan, and contains three tumuli. The Romans established a camp there by running walls of stone and lime upon and over the old defences.

Pottery with patterns similar to specimens found in the North German "Burgwalls" occurs in tumuli in the neighbourhood. The fort of Ográch (Ogratch) lies to the S.W. of Mostar. It is a stone fort enclosing a ridge, and built of loose irregular blocks, 1290 by 383 feet in extent. In the higher ground, at its southern end, and within its walls, is a long, large cairn about 20 feet high; at the northern and lower end is an oval ring-wall 170 by 110 feet; a long enclosure curves round the fort, and encloses the ridge up to and round the tumulus, whence an equidistant wall forms a long entrance passage to the left. The total length of wall is about 4050 feet. On the hill of Kicin (Kitshen), rising 400 feet above the plain over the Bunica river, and north of the last, is a dry stone fort with two concentric ring-walls on the summit, and two curved walls extending from a precipice along the lower slope. The little central enclosure is 55 feet diameter, the

* Thus, also, in Yorkshire, the tumuli are of the Stone Age, and many neighbouring forts of the Bronze Age. See, *infra*, section 30.

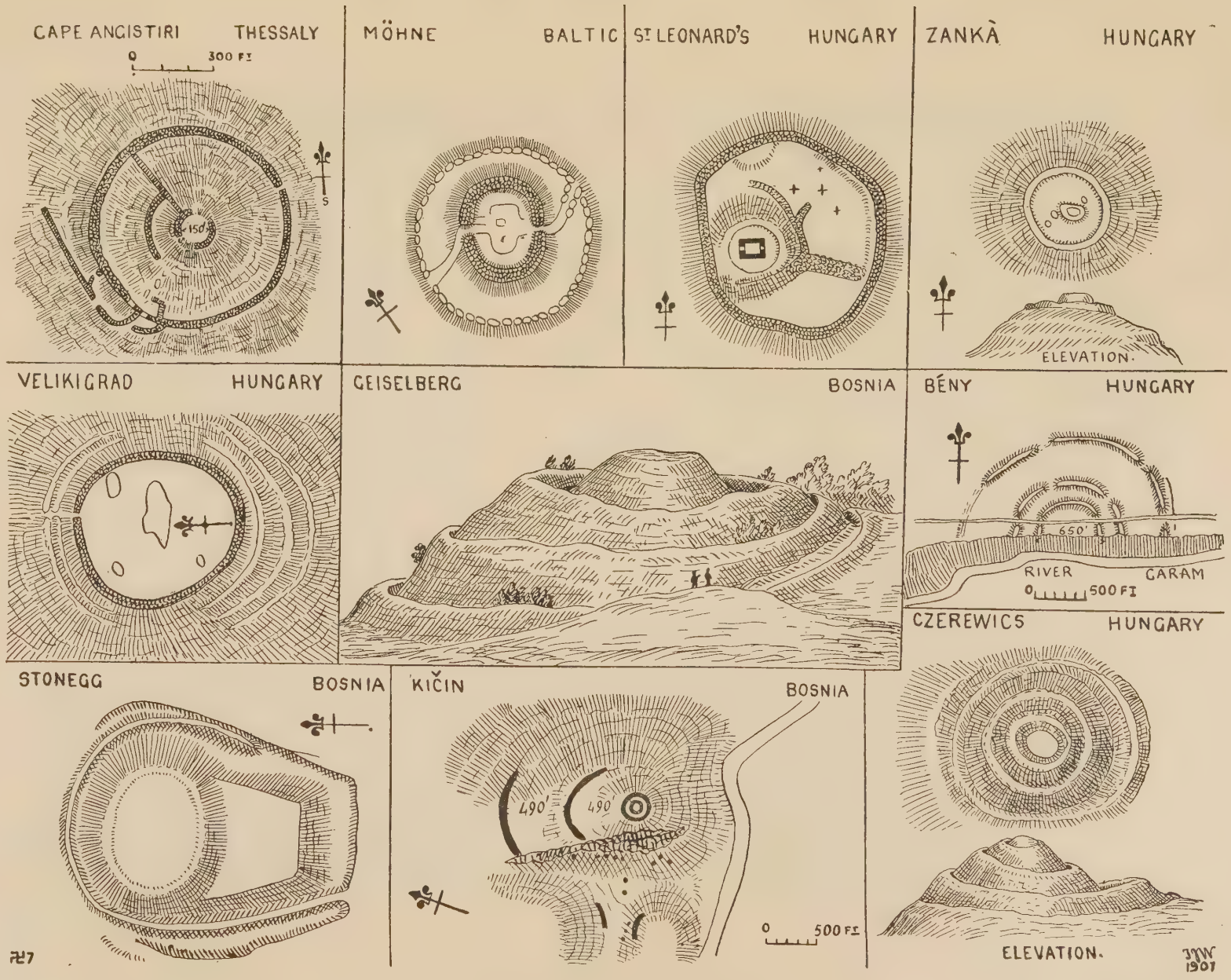

FIG. 2.—FORTS IN EASTERN EUROPE.

outer ring 237 feet, the others 1408 and 975 feet from the upper fort; two other curved walls defend a low spot on the ridge beside the river; and about this point numerous foundations of circular huts remain, 9 to 12 feet diameter. A later stone and mortar breastwork of Roman times stands among these. On an isolated hill to the east of Mostar is another small prehistoric stone fort, also enclosing a cairn or "gomila." The enclosure is 247 by 211 feet, and is oval; on the plain below are many tumuli.

The great "Wallburg" of Debelobrdo is an oval dry-stone fortress, 360 feet by 113 feet, on a hill top. Immediately below are traces of early settlement on a plateau named Sobunar, whence the inhabitants could quickly find shelter in the hill-fort above them.

There are other ring-walls, circular, elliptical, trapezoid, or conforming to the hill, closely resembling the cahers of our western districts; in some cases, as at the ring-wall of Puhovac, the walls have proper facing of dry stones, the forts vary from 30 to 300 feet across, and in some the entrance of the main fort is defended by a lesser ring. Finally, we may note the great "Hausberg," near Stonegg, a flat-topped mote with three lofty concentric earthworks girding it, and resembling the great "duns" of Tipperary and Limerick.*

9. **Roumania.** — There are not a few resemblances between the antiquities of this district and those of Ireland. The place-name Dounon occurred in it in Roman times. At least one undoubted place of Celtic settlement, afterwards occupied by the Romans, remains; a huge earthwork, "Caput Bovis"; the walls are now nearly removed; it rested on a hill above the valley of the Sereth. Earthen mounds are common between the Danube and the Carpathians. From excavations it would appear that some of these were motes, "outposts and places of observation," and not sepulchral tumuli. We may incidentally note among later monuments in the district that the short-armed cross with expanding base like the cross

* "L'Anthropologie," tome v., 1894, No. 5, pp. 563–568. Radimski, "Præhist. Fundstatten," Plate 135. "Bosnia-Herzegovina and Dalmatia," Dr. Robert Munro. "Dolmens of Ireland," William C. Borlase, vol. iii., pp. 1127, 1128. Plans of Ograc, Kicin, and Stonegg are given herewith. Figures 3 and 4.

at St. Doulough's, Dublin, and the cross with roof-like top and enclosing circle (beyond which the arms slightly project) are not uncommon. The name Viodunum was found in this district in Roman times, and, strange to say, the very "Irish sounding" name Dinogeha still survives.*

10. **Italy.**—It is hard to turn aside from the promontory forts, great Etruscan citadels, and terraced hills of the central peninsula of ancient culture. Comparison of Irish remains with Etruria is common with our older antiquaries, but the undoubted resemblance may arise from their common source in the farther east, while the more or less direct influence of Etruria on our islands has yet to be established. We need only recall a fine example of a terraced hill, Monte Musino—the ancient Ara Mutiæ—with four rings of terraces, and another, the Flavian Hill, with three terraces, for these remains closely resemble the Herefordshire Beacon, and certain other terraced hills in Scotland and Ireland.†

11. **Austria-Hungary.**—Still going northward we find no falling off in the typical forts; the very name "Duna" appears in Hungary, but though attached to certain forts it may not be derived from the Celtic "dun," as it is also the local name for the Danube. We cannot be too certain whether such names even as Duna Földvar are not derived from the stream on the banks of which they usually are found. The forts frequently occupy the summits of high hills girt with precipices, or the centre of nearly impassable boglands. The greater number are earthen, and they are called "Hrings," "Földvar" (earthen camp), or "Poganvyar" (Pagan camp), and "Devil's ditches."

Several types occur, all strikingly similar to the Irish; for example, the plain oval "rath" of Maslak, girth with a fosse, and with a path turning to the left of the entrance, and therefore exposing the right side of an assailant to attack. The great "Hring" of Bény consists of three crescent earth-works, the ends abutting on a steep slope above the river Garam the

* "Untrodden paths in Roumania," Mrs. Walker, pp. 18, 27. "Roumania in 1900," G. Berger (Ed. A. H. Keane), p. 11.

† Trans. Roy. Soc. of Literature, ser. 2, vol. xx., part i., p. 68.

diameter of the central enclosure is 650 feet; thence to the second ring 320,* and to the outer 715 feet. In all, this great fortress measures about 2100 feet over all, and contains two villages, Nag Bény and Kio Bény, within its rings. It resembles Dun Aenghus in plan being of a type occurring also at Cahercommaun in Clare, and Errickstane in Scotland. Cserevics is a lofty mote girt by three other high and concentric rings; it is also earthen; a small fort occupies a spur of the hill. Zanka is a ring-wall, and has three lesser forts inside, like Emania and Caher Crofinn at Tara. Regöly fort has ramparts about 40 feet high, and measures 1312 by 2165 feet over all. Velikigrad seems to consist of a large irregularly oval ring wall, the hill sloping steeply to each side, the more gradual approaches to the north and south being defended by two and three lines; the entrance is to the north, and runs in a straight line through the three defences. St. Leonard's Church stands in a ring-wall, which Mr. Borlase rightly considers nearly identical in plan to the cashel of Innismurray. (Figure 23.) It consists of a massive cashel (stein mauer) irregularly circular in plan, following the edge of steep slopes. The enclosure is divided by two ancient walls forming an "S," while the church occupies a circular and (judging from the plan) an entrenched mound. Several promontory forts formed by cutting one or more ditches across a mountain spur are named, and, indeed, are the simplest of all forts, and often the most defensible. Much, in his Prehistoric Atlas of East Austria and Hungary, gives fine plans of a noble mote, the "Hausberg" of St. Ulrich, which closely resembles such Irish motes as Lismore, Dundermot, and Knockgraffan, and has a high mound, which in this case has a slight earthen rampart, such as occurs in the mote of Slane, in Meath, and the lower platform enclosed in a "keyhole-shaped" fosse. A list of 66 of these forts has been published.†

12. **Bohemia.**—A local term for these "Celtic" forts in Bohemia seems to be "Hradischt," pronounced Hradiste, and elsewhere "Hrad" or

* Stated to be 520, but shown as above on the plan.

† Report of Congrès International d'Anthropologie et d'Archéologie Préhistoriques, VIII., 1876, pp. 62, 79, 89, 98. W. Borlase, "Dolmens of Ireland," vol. viii., p. 1125. Much, "Prehistoric Atlas of East Austria and Hungary." Plans of Bény, Zanka, Cserevics, Velikigrad, St. Leonards, and Stonegg are given herewith.

"Arad" (equated with our "rath," but used indiscriminately for forts of earth or stone). Dr. Ferdinand Keller describes several of these; one consisting of an oval ring-wall, with a fan-like enclosure running down the slope, recalls examples in Ireland. Another is called Knezihora or "the Height of the Princes"; it is near the town of Katovic, and measures about 360 feet by 186 feet inside. It suggests such an Irish fort as Langough, a ring with a long looped wall, and a semicircular enclosure lying within an outer rampart. The outer wall is 12 feet to 15 high, and the inner 15 feet to 20 feet high; it is partly vitrified. Vitrified forts, with one exception, are confined to the south-east of Bohemia; they and numerous stone forts are of the Bronze Age, and have been attributed to the Celts. The Pleschiwetz, near Ginetz, is an unvitrified stone fort, its outer rampart 400 paces long. It has an oval ring-wall at the head of the plateau; the lower ridge is defended by two other walls with several gates, while, lower still, a double wall girds the whole hill top. Local legend states that it is a fairy garden with "giants' cellars" under it, filled with treasures and wine; the numerous holes dug in various directions tell of constant attempts of treasure-seekers to secure these hoards, and recall the similar beliefs, with like disastrous results, which attach themselves to many Irish forts.

The Vladar fort, near Luditz, is of stone, with a rampart about 30 feet thick and 24 feet high. The Radelstein, near Bilin, is a ring-wall of dry stones on a rocky but wooded hill; the view of this caher, by Much, might easily pass for an Irish fort. It has the further peculiarity that the wall is built in sections, as in the forts of Aran and Clare.*

13. **Russia, Esthonia.**—Before dealing with Germany, we may conveniently note that in Livonia, and the islands in the Baltic and near its coast, typical "Celtic" forts remain. Kruse gives a plan of a fine Bauerberge or fort of earth and stones on the island of Möhne. It consists of two nearly circular rings; the inner has foundations of other enclosures, and has

* Dr. Keller, Proc. Soc. Antt., Scot., 1868–70, p. 158–161. Borlase, "Dolmens of Ireland," vol. iii., p. 1130. Plans of the Hradiste, called Knezihora, near Katovic, and also of the Pleschiwetz are given on next page.

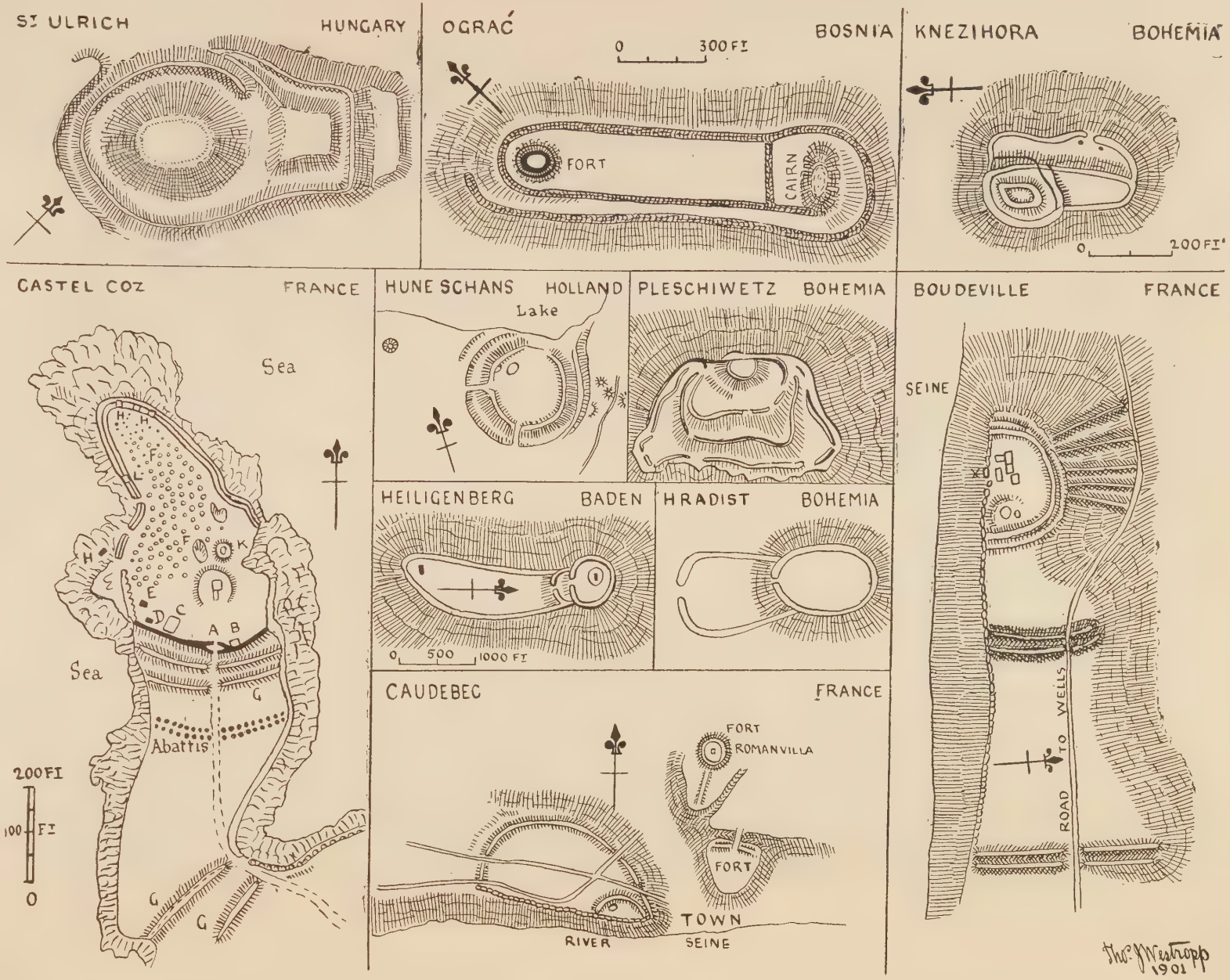

FIG. 3.—FORTS IN CENTRAL AND WESTERN EUROPE.

entrances to the north-west and south-east, whence passages (the eastern marked with large stones) lead to the left as one leaves the fort, probably to expose the right side of any assailant. The outer ring is fenced with very large stones; and the whole recalls the caher of Ballykinvarga, in Clare, though lacking the close-set abattis inside the ring of large stones. The name Daingen is applied to these forts in Livonia; and we find a river Duna, and town Dunamünde, at the Gulf of Riga, whatever may be the origin of the names.*

14. **Sweden** has also forts called "Ring-murs," and closely resembling Irish cliff cahers. One at Södermanland is a crescent wall of great thick ness, another called Ismanstorpsborgen, in Oland, is a circular wall of dry stone, and is crowded with burial enclosures. In West Göthland are many boulder cairns and dry-stone huts in which are found stone implements, clay vessels, and amber. On the Island of Moen are tumuli containing tombs of slabs with entrances to the east and south.†

15. **Germany, Prussia.**—To return to Germany, keeping along the northern section, we find many Burg-walls in which pottery is found similar to that found in lake-dwellings. Other ring-walls have piling under them; this is supposed to mark a later date than the incursions of the Slavonic settlers. Part of the mounds of at least two Irish forts were over piling—the great Dun of Dorsey, and Dungorkin. Tumuli called Hünen betten occur in Northern Germany. The Prussian Burg-walls are of earth and stones, sometimes on the water's edge, sometimes oval, with massive rampart and a surrounding fosse communicating with the water, sometimes oblong with the corners rounded. In more western Prussia, near the German Ocean, are lake-dwellings on piles, circular earthen forts, with double and triple rings, and deep fosses sometimes containing water. Some of the forts are called "Hünen ring," as, for example, one near the

* Borlase, "Dolmens," iii., p. 1130, citing from Kruse "Necrolivonica." The plan of Möhne is given on opposite page.

† *Ibid.*, iii., pp. 1133, 1134, citing Hildebrand and Sjoborg. "The Primitive Inhabitants of Scandinavia," S. Nilsson, Ed. Sir J. Lubbock, 1868, p. 126.

great statue of Arminius. The absence of entrances is noteworthy, and recalls a peculiarity of several Irish cahers and many raths.*

16. **Rugen.**—In this great, and to the pagan Slavs holy, island are the remains of a cliff fort. This defends a jutting promontory, 175 feet high, which was inaccessible on the east, south, and north-east. The approach from the land side was fenced with a rampart of stones, sods, and timber, and a fortified pathway led to a well outside the fort. Within stood the great temple of Arcona, dedicated to the light-god Suantevit, the four-headed, but of this splendid timber structure we need only note that it was oval or round in two concentric rings, and had only one entrance. The ruin of such a building would closely resemble a nearly levelled rath. Three hundred grooms and as many sacred horses were kept, in order that the deity there reverenced might ride forth and aid his worshippers. Borlase considers Arcona a Celtic word, equating it with such names as Arcunia, Orcynia, Hercynia, and such Irish names as Ard Macha, Ard Nemidh, and Tor Conaing, and fancies that the description of the hall of Cormac mac Airt, at Tara, may be a description of the temple of that hero, but, even if we could accept his theories, the object of this paper would preclude us from discussing them.†

17. **Brandenburg.**—A very fine mote, the Schlossburg, may be noted in the neighbourhood of Benau Friedersdorf, near Sorau. It is more or less circular, with a slight rampart, and two lower enclosures diminishing in size, lying down a slope, and enclosed with high mounds. Such earth-works round Sorau are known as "Hünen Schlossen," or Huns' castles, as is also the case in Holland; and cairns or mounds are called Huns' graves, we understand, by the Danes, who in their turn have wrongly been accredited with similar remains in Ireland. The long appended enclosures of these motes are called in Germany the "hagel" or hook.‡

* Borlase, "Dolmens of Ireland," iii., 1131, citing Lissauer; Munro, "Bosnia-Herzegovina and Dalmatia," p. 93, &c.

† *Ibid.*, vol. iii., pp. 1087, 1090. "Dalmatia and Montenegro," S. J. Wilkinson (1848), vol. i., p. 17.

‡ *Ibid.*, iii., 1125–1127.

18. **Baden and Hessen Nassau.**—In Baden we find fortresses which some attribute to Celtic tribes and others definitely to the Ubii, 100 B.C. These great "Wallburgs" and "Ring-Walls" gird several hills. For example, a large fort of two concentric rings remains on the Altkönig Mountain in the Taunus; and a remarkable fort encloses the summits and ridge of the beautiful Heiligenburg overhanging Heidelberg. It was known to the Romans as Mons Pirus, and consists of a round fort about 650 feet in diameter on the higher peak; thence a long loop of wall surrounds the saddle and lower peak of the mountain, on which stands a ruined church. The fort wall consists of great heaps of sandstone blocks, and the enclosure is about 2640 feet long and 440 feet across the ridge.

19. **Switzerland.**—"Ringbergs," or circular forts of earth, entrenched summits and promontory forts on spurs of mountains, remain in the neighbourhood of Berne and Zurich, and in the Jura. Deveher (Jura Bernois) girds a hill, and consists of an entrenchment with the entrance to the north. At Cheteley is a fort of three enclosures on a projecting neck girt with cliffs. Chateau Chalon (Jura) is a promontory fort with a semicircular rampart across the ridge. Near Zurich are, for example, Birchweil, a "château payen," or "heydenmauer," consisting of a circular rampart round the top of Mount "Moulins," and the fort of Bassersdorf, a parapet and fosse across the end of a spur on the Horm. In one instance a promontory fort at Laufen, in Berne, is further protected by a line of low pillars, like the abattis at Castel Coz in France, and a few forts in the British Isles.*

20. **Alsace-Lorraine.**—The forts along the basin of the Rhine are of considerable interest to Irish archæologists. We may note a few typical examples. Haspelscheidt fort is of stone, with two enclosures, and is locally called the Schlossberg or Altschloss. The upper fort is an elliptical ring-wall on a plateau with steep slopes, and encloses a space 986 by 524 feet. The walls are of rudely quarried blocks; and about 15 feet high, and 40 feet thick at the base. A second lower annexe occurs, similar

* "Dict. Archéologique de la Gaule, Epoque Celtique," i., pp. 122, 162, 271, 284, 339, and ii., p. 93, &c.

to those in the Aran and Clare forts, and has a wall nearly 60 feet thick and 25 feet high. The upper fort has gateways to the east and west, and ruined buildings in its enclosure; a small spring wells up not far from the west of the fort. The Hommertburg is a ring-wall on an isolated rock. These forts are usually called "heydenmauer." One of them, not far from the Rhine, commands a fine view of that river, the Necker, and Mannheim, and is said to have been the place where Attila encamped for the winter before advancing against the Romans. It commands a pass, and is on an advanced spur of the mountains, a great natural bastion defended by steep, almost precipitous slopes. The fort consists of a circular wall about 2600 feet in diameter, a confused mass of stones heaped round the platform which showed the foundations of many ruined buildings. It is partly protected on the side next the mountain by a fosse. The crest above it is named the Teufelstein, for, as has often been noted, popular superstition loves to connect these ancient forts with all sorts of spirits, from the fallen Archangel to the Banshee and the Phuca. On the crest of Tænnichel is another dry-stone fort, a long enclosure like Ograc, Katovic, Heiligenburg or Langough. It has a wall of large blocks laid in courses, without spawls or cement, 8 feet to 10 feet high, and 6 feet to 8 feet thick. Finally, M. Schweighauser describes another fort not of Roman origin, crescent-shaped in plan, with two transverse walls dividing the garth into three. The walls are 5 feet thick, of large, rough quarry blocks, sometimes bonding through the wall.*

21. **Denmark.**—Motes with the lower enclosure and fosse of the Lismore and Dromore type occur in Denmark. Olaus Wormius, in 1641,† states that, in Denmark, the sepulchral mounds were encompassed in some cases, though rarely, by circles of stones; others were simple mounds of earth containing one burial, or, in other cases, a number of bodies. He describes the "Danewirck" made by Queen Thyra from sea to sea in A.D. 808. In

* Memoirs of the Royal Society of Antiquaries of France, vol. v., p. 106, 1823. M. Philippe de Golberg, on "Fortifications in the Vosges Mountains." "Monuments Celtiques du bas Rhin," by M. Schweighauser. "The Heydenmauer," vol. i., pp. 30, 33, London, 1832.

† "Monumentorum Danicorum Libri," Book i. T. Molyneux, on "Danish Mounts," &c., 1725.

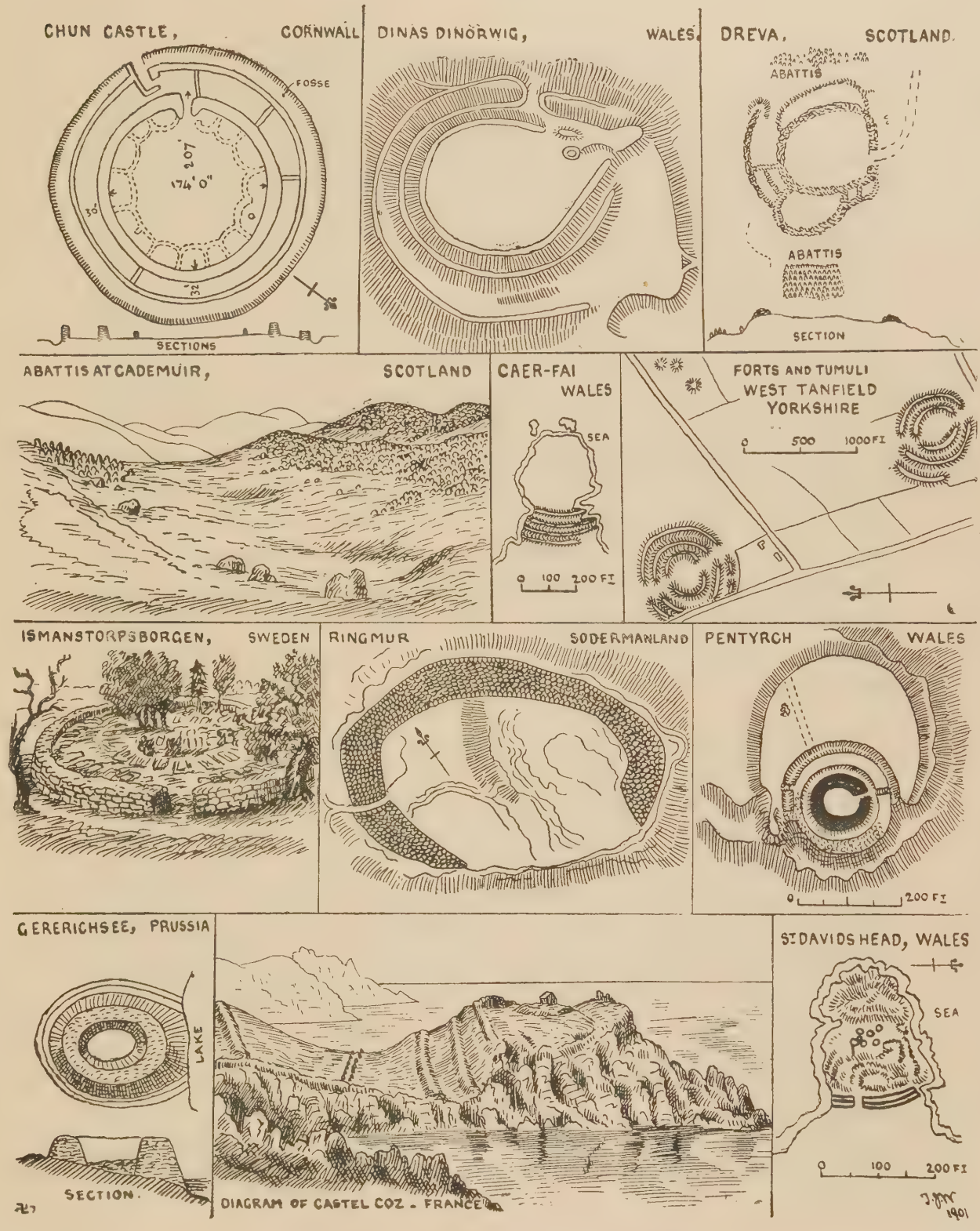

FIG. 4.—FORTS IN CENTRAL AND WESTERN EUROPE.

later days it was strengthened by mounds and fosses,* and must have resembled the long entrenchments of Duncladh, the Danes' Cast, the Worm Ditch, and Cleeroe. The quotations from Wormius by Molyneux combined with the statement in Giraldus Cambrensis to familiarise the English speakers in Ireland with the name and idea of Danish forts.

22. **Holland** and **Belgium.**—A very typical "rath," locally called a "Hune schans," lies on the Udeler Meer in Guelderland. It is a large, flat-topped, and roughly circular, earthen fort, with a fosse and, we think, from the plan, a second ring, a small mound, lies on the platform, and there are "gangways" or ramps across the fosse to the south and west. Four tumuli stand in the immediate neighbourhood.

Groups of forts occur in Belgium, for example, at Lasne in Brabant, where six circular earthworks remain about 182 feet in diameter; near them is a tumulus about 16 feet high.† Borlase notes a fortification on the coast of Holland named Enchusa, and compares its name and situation to those of Dun Aenghus (save for the high cliff on which the Irish fort is founded). "Natura loci munitum, maris furore objectum, quem in extremo terræ margine situm despicit."‡

23. **France.**—Information regarding the forts of this country is very accessible, the main difficulty being the necessity of selecting from abundant materials. Many of the Gaulish forts are, however, different in construction from those which we have been considering. Traces of frameworks of beams, held together in some cases by bronze pins, and embedded in dry-stone walls, occur, as at the fortress of Beuvray (Bibracte ?),§ and bear out Cæsar's description of such edifices. Two facts mentioned by Cæsar, the excluded water supply of Uxellodunum and the outwork walled with dry stones and 6 feet high on the slope of Alesia, recall Irish forts.‖

* "Monumentum hoc validius ac firmius multo aggeribus et fossis redidisse."

† "Dict. Arch. de la Gaule," ii., p. 75 and p. 1126.

‡ Borlase, "Dolmens," iii., p. 1132, from Nijhoffs, "Bijdragen."

§ "The Mount and City of Autun" (Hamerton), p. 64.

‖ "Fossam et maceriam sex in altitudinem pedum præduxerant."—*Bello Gallico*, vii. 69, 70.

24. **Brittany.**—Taking Brittany, on account of its close racial connexion with Great Britain, we may note that characteristic "promontory forts" remain in Finisterre; for example, at Beuzec in Cap Sizun, near Quimper, a large cliff fort upon a headland. Two walls and several fosses and mounds defend an isthmus, the mounds increasing in height inwards. It has the foundations of several hundred rectangular buildings, one 32 feet by 16 feet; it is called Castel Coz. We first meet a mound losing itself in the slope, extending only across about half the neck of the promontory. Inside this is a wall of granite blocks. Then, after crossing a spacious enclosure, we find two rows of blocks 4 feet high and 5 feet apart. Further still are earthworks and a stone wall curving outward. There are hut depressions at the end. Excavations have been made, and disclosed traces of an early Celtic settlement succeeded by a period of Roman occupation. At Laz, in Finisterre, near Kerzilaoenen, is a small fort 65 feet in diameter near a menhir and dolmen. In Morbihan we find a circular fort 215 feet in diameter. In Dinan, Côtes du Nord, it will be remembered, stood that unmistakable round-topped mote with fosse and ring of earth defended by palisades and wooden towers, of which and its assailants the Bayeux tapestry gives so spirited a view. The very name apparently preserves a reminiscence of the dun. Hénansal has a fort called Durestal, a semicircular structure 2270 feet across, with a large fosse and triangular annexe, the mounds 26 feet high and 39 feet thick at the top and 48 feet at the base. Langast is a circular fort, 687 feet in diameter, and has earthen ramparts, 22 feet thick, on a little hill over a ravine.*

25. **Normandy.**—In Calvados, near Bayeux, is a fort called "La Burette," on a hill spur near Seulle, defended by two earthworks. At Aubry en Exmes, near Argentan, is an oval fort called "Château des Romains," and having two rings 20 feet high.†

26. **Seine Valley.**—Some very large earthen entrenchments remain in the valley of the Seine. The camp of Boudeville (fig. 3) consists of a great

* "Dict. Arch. de la Gaule," i., pp. 291, 292, 91; ii., pp. 18, 66, 75. Archæologia Cambrensis, er. iv., vol. ii. (1870), p. 287. Plan and view of Castel Coz given herewith, figs. 3, 4.

† *Ibid.*, i., p. 119.

series of enclosures containing 150 acres, and lies on a neck of land. The innermost fort is oval, of earth and rocks, on the end of the hill, with five radiating mounds down the slope farthest from the Seine to another semi-circular fence. In the oval fort is a "druid" pillar and many foundations; the neck leading to the fort is crossed by two groups of double fosses and mounds. The three forts at Caudebec are on hills which overhang the town. The first is oval with an inner enclosure; the second is formed by two trenches crossing a spur; and the third is circular and encloses the remains of a Roman villa. Jumièges fort is formed by great trenches across the neck of a bend of the Seine; and there are numerous other camps from 400 feet to 680 feet in circumference, and 15 feet to 25 feet high. The Abbey of Jumièges, as its Annals state, was built "ibidem castrum condiderant antiqui." In Oise, at Bailleu sur Thérain, is an oval ring-wall of two ramparts of great size, about 3425 feet north and south, and 1370 feet east and west; while, at Chartres, a ring-wall of "cyclopean" masonry girds the summit of a hill.

At St. Germaine, in Bar sur Aube, is a fosse across a spur of a hill, 85 feet long and 32 feet wide; 1400 feet farther up the ridge are parallel fosses and mounds, 490 feet long; and at the end of the spur is a mote with an earth-ring, and called "Le Châtelet." An oval fort with deep fosses remains near Arces in Yonne.*

27. **Central and Southern France.**—Château L'Archer, near Poitiers, in Vienne, has a "promontory fort" formed by a curved fosse and "oppidum" across a spur from a plateau; while a similar fort at Cras in Lot had a rampart of beams and dry stones. Huilly, in Saône et Loire, is a circular fort on level ground, about 600 feet in diameter and over 60 feet high. Entrenched tumuli and forts lying near dolmens (as at Challignac, in Charente) occur; while near the Pyrenees, in Landes, several large

* Society of Antiquaries of Normandy, Journal and Atlas, 1835, Plates vi. and viii. "Entrenched enclosures," by M. Leon Fallue. "Dict. Archéol. de la Gaule epoque Celtique," part i., pp. 114, 108, 121, 172. Archæologia Cambrensis, ser. v., vol. iii. (1886), "Pembroke shire Raths," and very many other authorities. Plans of Caudebec and Boudeville, figs. 3, 4.

circular forts girding the tops of hills remain at Sanguinada, Castera de la Gouarde, and Puyoo.*

28. **Great Britain.**—Here still more than in France the difficulty of selection presses hard upon us; and, indeed, we can only note here and there one out of the many forts similar to the types prevailing in Ireland. The ease with which material for fuller study can be procured absolves us from the task of giving anything like a general survey. Indeed, only for the necessity of impressing the fact how little unique or exceptional in type are our Irish forts we might almost have rested content with general statements as to the similarity. We will commence with Scotland, following it with the forts of England, treating Cornwall, as it deserves, in greater detail; and finishing with Wales, which brings our survey of non-Irish forts to a close.

29. **Scotland.**—Dr. Christison's lists of Scotch forts reckon at least 1300; a large number to anyone unaccustomed to the thousands of Irish forts. This abundance adds to our difficulties by obliging us to omit notes on many fine examples. The simple ring-fort, with or without concentric rings and fosses, is of common occurrence. A good example with three earthworks occurs at Northshields in Peeblesshire. A fine oval fort, with two fosses and a ramp across the inner one leading to the platform, is found at Dinvin in Argyllshire. Arbory fort, in Clydesdale, has a ring-wall with the entrance to the east, but is greatly overturned. It is 135 feet in diameter, with two irregularly concentric earthworks. Possibly, in such cases in Scotland and Ireland, the stone fort was an afterthought, built inside an older earthwork, as Mr. R. A. S. Macalister, with probability, considers was the case at Dunbeg in Kerry.

Two of the Scotch forts, Cademuir and Dreva,† have the unusual feature of an abattis of stones set in the ground. Occasionally a Scotch fort has a passage, cells, or steps in the thickness of the wall; and this feature is worked out very elaborately in the "brochs," which most

* "Dict. Arch. de la Gaule," ii., pp. 1–50, 250.

† "Early Fortifications of Scotland," pp. 225, 226.

interesting buildings, the limits of Irish fort types excludes from this paper.

The "promontory" fort, of course, occurs in Scotland as all over Europe. At Blackcastle rings, Berwickshire, are two curves across a triangular spur, and at Raebury Castle, Kirkcudbright, three fosses, and a rampart are found across a sea headland.

The simple entrenched mote and the table mote with a "base court" or lower platform remain; as, for example, Kirkland mote, Kirkcudbright, and the fine mote of Urr in the same shire. The latter rises on a hillock above the river Urr; the "base court" measures 460 feet by 220 feet, or 228 feet by 220 feet excluding the mote proper, which is 25 feet high and entrenched; the whole is girded by a fosse and earthwork. The axis, as is common, lies north and south. Another type, which, so far as we are aware, does not exist in Ireland, is oblong, both as regards base court and citadel. The fort, with one or more ramparts, crescent-shaped in plan, and abutting on a cliff or hillside, is common. A fine double example, two forts conjoined, each with three ramparts, remains at Coldingham. Errickstane in Annandale has three crescent-mounds, like the "Hring" of Bény, while the Doon of Nunmill, a more beautiful example, abuts on a hill-slope in Kirkcudbright. It is a fort with two mounds and fosses, the interior, 154 by 202 feet, with trenches, 12 feet to 15 feet deep.

Of cliff-forts, on more or less isolated rocks or knolls, there are examples in the stone fort of Gallanach on Kerrera Sound, which, by the way, has the extra defence of two high dykes of natural rock, and Dun Chonallaich, Argyll, like Cahercashlaun in Clare. The fort with the long loop is found in a few places, as at Finaven in Forfarshire, which measures 500 feet long east and west, and from 80 feet to 140 feet north and south. It is farther defended by a natural mound to the east. The fort is vitrified, and is said to have contained a well.

Smaller forts set in the main walls, and representing a step towards towers and bastions, remain in Barnheugh fort, and Dungarry, on Ben Tuther. Trusty's Walls fort, near Anwoth, seems from the map to be defended by smaller forts on the fourth terrace of its eastern slope. Rectangular forts are not uncommon, and are often attributed to the

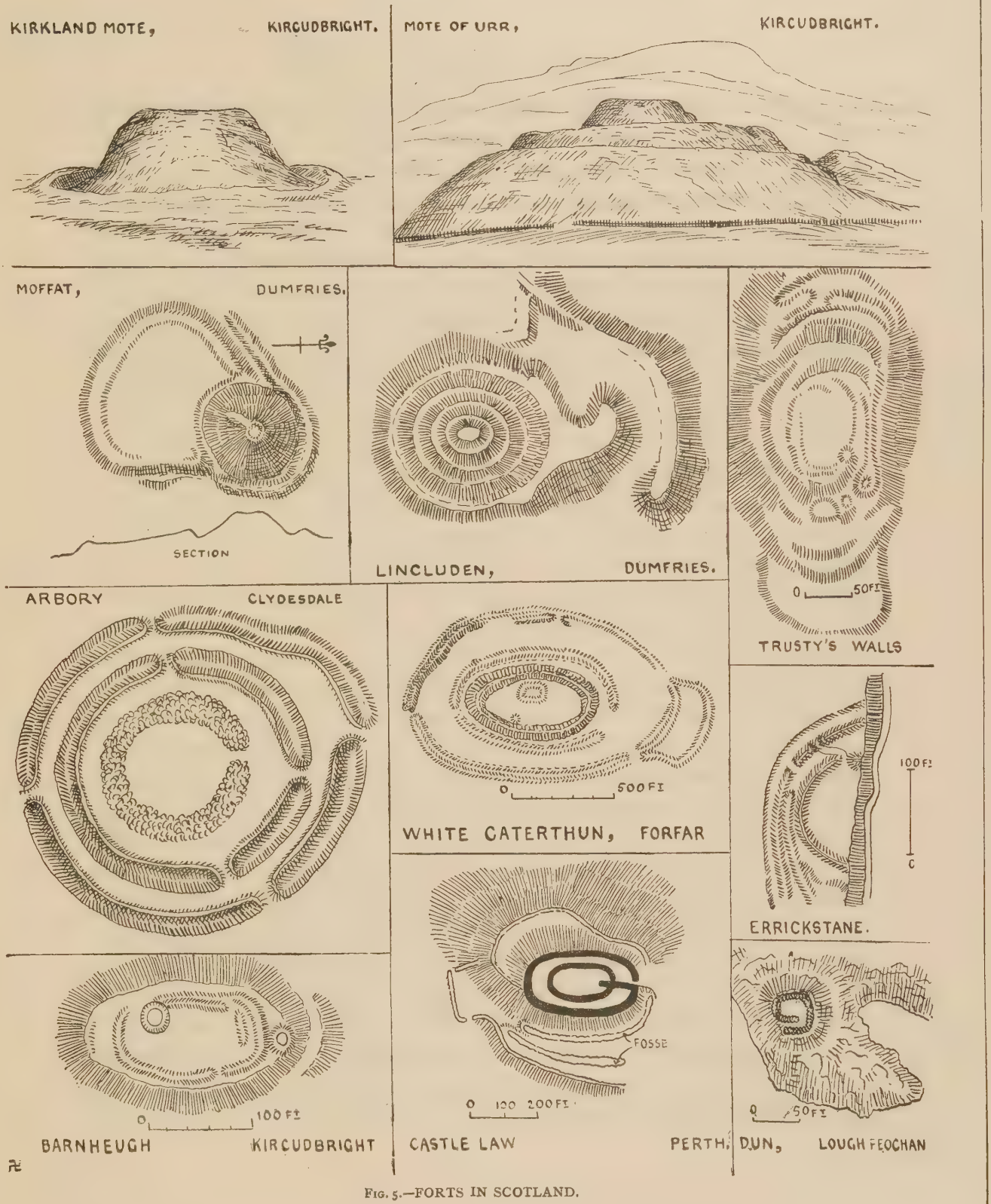

FIG. 5.—FORTS IN SCOTLAND.

Romans, in some cases apparently with justice. Like their Irish equivalents, however, many are more probably Celtic.

The complicated forts, some with as many as eight mounds, have no Irish equivalent; but the simpler form, with from one to three mounds and fosses, is represented. We find a rectangular bastion in the third outwork, on the slope below the curious double-walled oval stone fort of Castle Law, Perthshire. Some structural features call for brief notice. The rock-cut trenches, largely filled up as at Castle O'er, Dumfriesshire, occur in Irish forts as at Tara (under the earthworks of the Rath of the Synods and the King's chair), and the hill-fort of Doon, above Kilfenora in Clare. Alignment of forts, a phenomenon not uncommon in Bohemia and of frequent occurrence in Ireland, is found in Scotland; also great groups of hut-sites, as at Eildon Hill, where some hundreds occur. Forts with walls of loose stones, like the White Caterthun, are more rare than those with built walls. Masonry of various kinds occurs, the walls varying in width from 8 feet to 12 feet. Sometimes thin walls of 4 or 5 feet are found, or very thick walls from 14 to 24 feet wide. Sometimes, as in Irish forts, varieties are found in the same wall, as where a layer of slates was laid over as well as under larger stonework in a fort on the Island of Luing, Argyllshire. The forts not unfrequently lie on a sloping site.

Polygonal masonry was used at Dreva with packing stones in the interstices. The coursed masonry found in not a few Irish cahers is not unknown in Scotland, nor is the batter (or sometimes curve)* of the wall face. Steps and chambers have been found in the south fort of Luing, and a gallery in the promontory fort of Dun Stron Duin on Barra Head.

Some Scotch forts give evidence of the use of timber beams in the walls, like the forts in France already noticed, and which Cæsar mentions. Vitrified forts are fairly common, at least fifty-three remaining in Scotland, while only seven are alleged to exist in Ireland, and, it is said, none remain in England—one supposed Welsh example, five in France, and a few in Germany and Bosnia complete the list which is merely mentioned here, to excuse or explain the fact of their exclusion from this paper, which is devoted

* Brash, "Ecclesiastical Architecture of Ireland," p. 5, mentions this curved batter as existing in forts of Caithness and Sutherland.

to the more usual forts of earth and stone. There are very few examples of fort gateways sufficiently preserved to be accurately measured. The smallest is 2 feet 6 inches wide.* Three have gateways from 3 feet 2 inches to 3 feet 6 inches, two are about 5 feet, two about 6 feet, one 7 feet 6 inches, and one 10 feet wide. Guard-rooms occur in two gateways; in one case it is outside the gate. A curious form of fort, somewhat spiral in plan, occurs in Scotland and Montgomeryshire, and one example appears on the O.S. maps of Tipperary. Walled islets occur in Scotch lakes, as, for example, Dun Torquill in Loch an duin,† in N. Uist, which has a causeway of large stones.‡

30. **England.**—The plans common in Irish forts are very well represented in England. The round or oval fort, with or without fosses, is, as usual, the most common. For example, a typical group of forts and tumuli occur in the parish of West Tanfield in Yorkshire. Three forts stand in a line from N. W. to S. E., the two more northern have three rings, the southern has only one; and (a curious fact) each fort has two entrances facing the N. W. and S. E. on the axial line of the forts. A fine and typical example at Winterbourne, near Bristol, is a great oval fort, 540 feet by 420 feet, enclosing four acres, with a well and a long barrow in its garth.

Promontory forts on sea surrounded headlands occur in Hampshire§ and elsewhere, but are most characteristic of Cornwall, where they are called "cliff castles," as for example, one at Maen, consisting of a wall of large blocks, built up with smaller stones, and running across a headland; the

* There are, so far as we know, only four Irish forts in which the width of the main entrance approaches this narrow opening: Ballyelly, Dangan, Caherdooneerish, and Ballynasean.

† "Reliquary," i., No. 4, 1895.

‡ Roy's "Military Antiquities," Plates xxvi-xlvi; George Chalmer's *Caledonia*; *Gentleman's Magazine*, 1831, "Vitrified Forts in the Orkney Islands"; Proceedings of Society of Antiquaries of Scotland; "Early Fortifications of Scotland," Dr. D. Christison, and very many other authorities.

§ Hengistbury Head, near Christ Church, has a straight fosse and double mound across the neck of the headland. Inside this we find a tumulus which contained an urn and human bones; there were also some irregular oval enclosures, "Archæologia," vol. v., p. 237.

long lintel still remains on its gateway. To keep together our examples of Cornish forts, the district having so marked an individuality in race and history, we may mention the very fine ring-wall of Chun Castle. It has two walls and radiating lines between, with a rather complicated approach to the gateway. (Fig. 4). There is a fosse round the outer wall, as at Staigue in Kerry, and a very regular series of inner enclosures in the garth (somewhat akin to those in the caher of Ballykinvarga in Clare); one of these contains a well, an unusual feature in Cornish, as in Irish forts. Of other ring-forts in the district, we need only cite Cairn Conan (Tregoning), a large oval enclosure of earthworks faced with stones, measuring 318 feet east and west, by 276 feet north and south. Triple ringed forts occur like Tywardreath. In the Kelly Rounds and Castle Dor, we find the ring-fort with a side annexe, fan-like or semicircular in plan. While Castellack Round has pillars embedded in its wall* like the Irish caher, called, by Sir William Wilde, "Eogan Biel's fort," near the Church of Inismaine on Lough Mask.

The ring-fort, with the fan-like side annexe, occurs in other parts of England, as at Marston Tressel in Northamptonshire.

Another type of ring-wall, not quite paralleled in Ireland, is found more especially on Dartmoor. Like some of the Kerry forts, these enclosures are known as "pounds," and enclose the traces of hut-sites and cattle-pens. Grimspound seems to have a passage in the thickness of the wall, which is 20 feet wide. There is a well in the rampart. Throwleigh is of better masonry than Grimspound, but its walls are only 7 feet thick.

The promontory forts on the spurs of inland hills are especially abundant in Yorkshire, along the Esk Valley from Guisborough to Whitby. Eight or nine of the spurs, mostly fortified with a single rampart of earth, sometimes with a core of loose stones, more rarely with a facing of dry masonry of large blocks; in a few cases several fosses and mounds occur. The fort on the third spur from the west has a double earthwork with a ditch, and farther back three earthworks and two fosses. In the rere of these is a

* For pillars embedded in the walls of forts, see Annual Reports of the Royal Institute of Cornwall (1865) p. 65. "Journal of the Archæological Association," vol. xvii., p. 1. Dun Bharpa as described in "The Reliquary," vol. i. (1895) p. 203.

ring-fort; still farther back a single mound crossing the ridge. Then a mound across two-thirds of the ridge from the west, and another overlapping it from the east, running down the eastern slope to a bog. Behind the second rampart is a hut-site and several tumuli, hundreds of the latter cover the adjoining moorland, some having a kerbing of stones round them. Among the tumuli are a flat-topped fort, with fosses and ring, and a circular earthwork containing a monolith. The forts have been found to contain antiquities of the Bronze Age, while (as a rule) the tumuli belong to the Stone Age. Of such forts on the coast the largest and most complex example is probably Hillsborough, near Ilfracombe, in Devonshire. It occupies a rocky promontory 300 feet high and about 40 acres in extent overhanging the Bristol Channel. The only accessible side, towards the south, is protected by double entrenchments which are parallel for half their extent and then diverge. The entrance is placed so as to expose the unshielded right side of an assailant to the defenders. The walls are of loose and broken rocks, and a spring wells out beside them.

Forts exhibiting the crescent plan and abutting on cliffs and steep slopes (like the cahers of Feenagh and Cahercommaun, in Ireland, and perhaps Dun Aenghus) are not unrepresented in England. Two "horseshoe forts," each with four ramparts, occur in Northumberland in the valleys of the Breamish and Till; in them were found hut-sites, and stones with cup and ring markings. Others occur near Bristol; three existed at the cliffs at the Suspension Bridge, two of which were unfortunately levelled and built over. The Clifton fort had a rampart 455 yards long with a double fosse, and a heap of stones between; Stokeleigh had a similar defence, and its well lay at some distance from the rampart. A horseshoe fort, with a straight-sided outer enclosure, remains abutting on a steep bluff at Bannishead, near Coniston.

As a good example of a hill-fort we cannot omit the great Worle Hill fort, near Weston-super-Mare, on a hill overlooking the Bristol Channel. It is a quarter of a mile long and 240 feet wide, enclosing fifteen to twenty acres. Seven dykes cross the ridge, and in front of the camp is a sort of abattis of loose stones. The cross ramparts turn westward at the ends to protect the flanks, those on the north being unnecessary from the steepness

of the slope. The fifth and seventh ramparts are piles of loose limestone 12 to 14 feet high and 25 feet thick, recalling the description by Tacitus, "in modum valli saxa praestruit."* The fort has been much ruined by the builders of the neighbouring town.

The English motes are from 12 feet to 50 feet high. Their builders sometimes took advantage of a natural mound (as in the case of those carved out of the eskars in King's County, Ireland). The base court was circular, oval, or crescent-shaped in plan, and the whole was girt with a deep ditch, which, in some cases, as at Great Canfield, in Essex, was partly formed by a natural stream which filled the ditch.† Many of these motes only date from Saxon times, the construction of some twenty being recorded in the Anglo-Saxon Chronicle from the eighth to the tenth century; they formed the citadel of the "ton" or village. About 265 remain in England; they are scarce in the three northern counties, but are evenly distributed over the rest of the country.

Terraced hills like the notable "Beacon" of Herefordshire, and great lines of earthwork like the "Devil's Dyke," barely call for mention. Vitrified forts are not known to occur in England.‡

31. **Wales.**—We have separated the Welsh from other British forts rather for the benefit of those of our students who can study them from Dublin with less inconvenience than they can explore those of Galway or Kerry than for any great difference from other forts in Great Britain. Irish influence is apparent in the ruins no less than in the poems of ancient

* *Ann.* xii., c. 33.

† Great Canfield Mote, by Rev. E. A. Doronman.

‡ The authorities are far too numerous to cite; omitting the larger works, some of those more especially quoted above may be given:—Royal Institution of Cornwall Annual Reports (1846); Henry M'Lauchlan, "Giants' Hedges," church in fort, &c. (1848-56), plans. Plates xxi-xxvii. (1865), p. 65. Pillars set in walls; ring-wall round Church of St. Denis, &c. (1864), Maen, by J. T. Blight, &c. Archæological Association, *e.g.* vol. xvii., "British walls with inserted or included pillars." Yorkshire Archæological and Topographical Journal, *e.g.* vol. i., West Tanfield. Somersetshire Archæological and Natural History Society, *e.g.* (1851) Worle Hill. "Perambulation of Dartmoor" (J. Rowe). Gentleman's Magazine, especially the recent reprints in its "Library of Archæology" for inland promontory forts. And "Archæologia," especially v., Hengistbury, Francis Grose; vi., xix., Gloucestershire, T. J. Ll. Baker; xlii., p. 32, Cissbury and High Doon, by Col. A. H. Lane Fox; xliv., p. 428, Clifton, &c., Rev. H. M. Scarth.

Wales. We find hut-hollows called "Irishmen's huts,"* and raths (occurring with the legend of Irish settlers) in Pembrokeshire. Ring-walls are not uncommon. A good example, with a chambered terraced wall like the Irish forts and a side enclosure, may be noted at Pentyrch, in Carnarvonshire.† Caer Drewyn, near Bala, has compound walls 15 feet to 20 feet thick, with a terrace; along the top of the wall are hollows with regular faces supposed to have been chambers; the rampart has several sallyports and is nearly a mile in girth. Tre Ceiri, Pen y Gaer, and Carn Goch forts have also got terraced walls.‡ This is a notable feature, as we have not met it in Continental or English forts; while the traces (if any) in Scotch forts are very vague. Indeed, as a rule, it is absent even in Ireland, though (from its occurrence in such remarkable examples as Dun Aenghus and other Aran forts, Ballykinvarga, Cahercommaun, and other important Clare forts, Grianan Aileach, Caherdorgan, and several notable cahers in Kerry and Galway) most archæologists have come to regard it as typical and not exceptional in Ireland.

Dun Sylwy, in Anglesey, and Caer Creini have got an arrangement of stones laid on edge in their masonry, recalling forts near Lough Gur in Limerick, and Cahernaspekee, the baun near Cashlaun Gar, and the caher of Carrahan in Clare. Caer Creini has also got a rock cut "way" over its fosse.

The ordinary mote is found, but not in great numbers. About nineteen occur, eight being in Radnor, five in Montgomeryshire, and three in Denbighshire. Single examples are found in Glamorgan, Pembroke, and Flint. For example, Hendomen, in Montgomery, closely resembles in plan Dundermot in Antrim. Rhy yn Owen seems to be a combination of a mote and a promontory fort, as it occupies a spur.§ Nantcribben mote is 120 feet in diameter, no uncommon size in Ireland.

Promontory forts abound as much as in Ireland or Brittany. A few examples will suffice. Penrhyn Coch or Castell Coch consists of three

* Archæologia Cambrensis, ser. iv., vol. iii., p. 239.

† Plan, vol. iv., ser. iii., Arch. Cambrensis. Plan of Pentyrch herewith. Fig. 4.

‡ Archæologia Cambrensis, Ser. v., vol. iv. (1887), pp. 247–254.

§ Similarly, the mote of Ardnurcher, Westmeath, had fosses across its spur.

straight earthworks across a neck of land. There is a dolmen in the neighbourhood. Caerfai has three curved works and the remains of a fourth, convex towards the land side as is usual. St. David's Head, besides a group of huts, has three lines of stone walls, and an outer wall enclosing between itself and the three walls several huts and a dolmen; while Llanunwas has evidently been cut deeply by the sea since it was dug, as a creek runs in directly behind the earthwork, and there is no evidence that the earthworks were purposely formed to cover the creek, as suggested by Mr. Barnwell, while the inroads of the sea on some of our Irish forts are well recognised.

Fig. 6.—Pen Caer Helen.

The important fort of Pen Caer Helen has the rare feature of an abattis among its defences.

Hut groups occur, the most notable being in the great fortresses of Braich y Ddinas above Penmaenmaur, Tre Ceiri, and Dun Sylwy. The Irishmen's huts, in the latter, show those curious slab structures and kerbings which appear in some of the huts at Fahan in Kerry.

Of "horseshoe" rings abutting on a cliff, we have Marloes, in Pembrokeshire; an inner enclosure with three outer rings and a deep fosse, on the edge of a sea cliff.

Tre Ceiri and Dinas Dinorwig have been described in forms so accessible that we need only go very generally into their salient features. The first-named fortress rests on a steep mountain 1500 feet above the sea. It is about 1000 feet long and from 180 to 300 feet wide. It is girt by a wall about 12 feet thick and high. There are several outworks and lines of

defence to the west and south. The lintel of the N.W. gateway is in position; the wall has at least one terrace, and is believed to have had two. The garth is about five acres in extent, and crowded with the basements of huts in groups or rows. They were probably not beehive huts, but, like those in the Clare cahers, thatched or sodded. We have seen very efficient roofs made in Connemara by herdsmen out of long "scraws" of sod thrown like tablecloths over a little oval enclosure, with low dry-stone walls, and not even propped by timber. Perhaps in the caher huts this was often the case, and it would account for the small amount of stones and rubbish. The site slopes southward, and near the lower end is a small well. The local name for the ruins is also "Irishmen's huts," and it has been supposed to be "a last stronghold of the Gael against the Cymri." Dinas Dinorwig, in Carnarvonshire, occupies a lower but commanding hill, and overlooks the lowlands from the forts on Penmaenmaur on the north to Tre Ceiri on the south. It has two bold earthworks of irregular plan and an inner and massive stone wall, with a garth about 500 feet by 380 feet. A small ring-wall about 42 feet wide stands on a neck of crag at the northern end; the main approach turns to the left, and exposed the right sides of assailants to the defenders, who could also make a long stand in the looped ends of the outer earthworks.

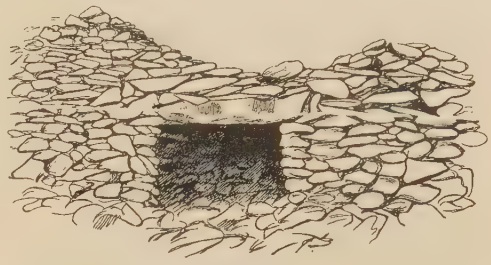

Fig. 7.—Gate of Tre Ceiri.

Mr. Robert Burnard informs me, with regard to the age of the forts, that of those he has excavated, Carn Brea has been occupied as a place of defence from the Bronze Age to the Iron Period, while St. David's Head and Trigarn seem to be of the Iron Age. The Dartmoor forts yielded only flint chippings. These facts are parallel with finds in Irish forts, where certain raths in county Galway only yielded flint; Dun Aenghus and Cahermacrole flint and later bronze finds; the Dunbell raths and forts (such as Knockgerranebane) in Counties Galway and Clare, bronze; and Caherspeenaun, Cahercalla, and Tara, iron objects. It is by no means

improbable that Wales may have been invaded by Irish predatory bands and forts built or dug by them, but as we have striven to show the types of Irish forts have their equivalents, not only in Welsh forts, but even far to the east across Europe.*

III.—THE AGE OF THE FORTS.

In the important question of the age of the construction of the Irish forts, this paper rather strives to bring together evidence than to state (still less assert) any very definite view. Facts seem to point to a date at least B.C. 800 for the occupation of some of the Bosnian and Hungarian forts, while some of the Scotch and Irish ones were either built ("construitur" is used in Latin annals) or entirely rebuilt between 800 and 1100 of our era. Some facts tell in favour of an early date for some of our Irish forts; it is, for example, impossible to attribute Moghane or Caher-shaughnessy to a period later than the conquest of Thomond by the Dalcassians, *circa* A.D. 370, and what tribe of sufficient importance to have built Dun Aenghus held Aran since the same date would be hard to conjecture. The Pagans of Aran, for example, seem to have been few, and with little powers of resistance, when St. Enda established the first Christian mission in Aranmore, at the end of the fifth century, while the Dalcassian princes resided near Limerick about A.D. 440, and did not need large residences north of the Shannon. A mass of traditions, records, and the unconscious allusions in Irish laws and literature show still more clearly that fort-building flourished in Ireland down to the rise of the peel-towers under English example. More than this suggestion it would hardly be safe to state, for the evidence is at present

* Pennant's "Tour to Snowdon," p. 174; Archæologia Cambrensis, ser. iii., vol. iv. (1858), especially "Earthworks and Motes"; vol. vi., "Carn Gogh"; vol. xi., "Cliff Castle of Maen"; vol. x., "Raths in Pembrokeshire." Ser. iv., vol. ii., "Tre Ceiri"; vol. iv., "Pentyrrch"; vol. vi. (1875), "Cliff Castles in Pembrokeshire," forts on St. David's Head, &c.; Moated Mounds, vol. ix., "Craig y Dinas"; vol. xii., "Din Silwy, Pen Caer Helen," Promontory Forts, Tre Ceiri; vol. xiv., "Pen Caer Helen." Ser. v., vol. iv., "Caer Drewy," "Craig y Dinas," &c. Montgomeryshire Historical and Archæological Collections, vol. x. (1877), "Hendomen Moats," &c.; vol. xvii., 1884, "Moated Mounds."

equivocal; and whatever dates may be hereafter fixed, it is probable that such forts were made and the types and details handed down unaltered from remote prehistoric times to the thirteenth century. We find (before the year 1242) the rath of Clonroad "a princely circular abode of earth" made for Donchadh Cairbreach O'Brien, while his grandson built six towers, and in the days of his great-grandsons the cahers were grass-topped and deserted, save by a few outcasts lurking in their souterrains (A.D. 1317).*

32. **Doubtful Criteria.**—Despite the assertions of several antiquaries whose opinion carries much weight, we cannot consider that anything even approaching an approximate date has been fixed for any prehistoric period in Ireland: the Age of Bronze in one district in eastern Europe may have coincided with the Stone Age or Iron Age in another, and similar ornaments or implements in Mycenæ and the Boyne or Shannon Valley may be very differently placed in the centuries. Ireland, in its artistic conservatism, reproduced features and ornaments of eighth century buildings in the fifteenth century, and even if older art reached here 500 years before Christ, it might by analogy have lingered on to the third or fourth century. We must bear in mind this caution when dealing with finds in forts. Another serious doubt might arise, namely, the possibility of a caher having been built (like many a modern garden-wall) round a spot enclosing earlier objects of antiquity. Thus the flint implements found in Dun Aenghus may have been lost on the hill by hunters ages before one stone of the great walls rested on another, while the fifth or sixth century bronze brooch found near them may have been lost when the tops of the abattis were already worn with centuries of storm. Neither is more useful for accurately dating the fort than a Roman coin, and a coin of Victoria found in a modern garden would be for dating its walls which were built ages after the Roman Emperor, and perhaps a century before the later monarch. We know of bronze celts found in modern yards and a cinerary urn under the floor of Monasterboice Church, and all these things teach us great caution in trying to fix dates.

* "Wars of Turlough," 1317, "Ruan of the grass-topped hollow (Ooans) cahers." "Even a man in an Ooan," *i.e.* a caher as still used in the district names.

We have also to consider the possibility of rebuilding having taken place. Did (for example) the Clancys, O'Davorens, O'Drineens, the O'Briens of Inishere, or the O'Conors never rebuild the ring-walls in which they lived, till the sixteenth or seventeenth century?

The rebuilding of the Board of Works at Dun Aenghus* or Inismurray is now nearly equalised by the weather with the early work. The forts are less weather-worn than some of our Irish churches of the eighth or ninth century. The material most probably had been weather-beaten for generations before it was levered up from the surface of the crag to build a fort. Only the weather wear of the tops of pillars can be necessarily attributed to the period since their erection. We could not be sure, even if O'Donovan's theory was correct, and the Dubh Cathair really dated 1000 years before Christ, that we have a single fort as it left the builder's hands, and the defaced inner wall of this fort is now rebuilt into terraces and steps which, to those who did not see the entire wreckage of the interior in 1878, seem genuinely ancient. Can we be more certain that the lintelled doors and steps of the dry-stone forts are more certainly "original" work than the mortar-built cut-stone steps and gate of Caherahoagh or Cahercugeola? The gateway of Dun Aenghus has joints beside it which fact† warrants Mr. P. Lynch in his belief that it is a later feature. It is hardly possible to question the marks of rebuilding at Caherfeenagh, Langough, and Caherdoonerish. The material admitted little difference of treatment at any period, and the hammer-marks on the stone-work of some of the forts occur on more than one of the dolmens in order to

* The inroads of the sea do not supply reliable data. It is quite possible that Dun Aenghus may have resembled Moghane in girding a hilltop with three ring-walls, but it may with equal probability have resembled inland forts like Cahercommane over a dry valley, Bairnsdale in Scotland, and Bény in Hungary. The central enclosure may have alone been a ring, and the two other walls may have abutted on the cliff. The eastern part of Doonmore fort, Loop Head, is now isolated by the fall of a natural arch; but a similar and even larger arch, not far from its site, was made in 1897, in one night, and pieces of cliff 10 or 12 feet deep have collapsed in the last thirty years. The breaking of Illaun Fitæ, on the same coast, into three is recorded in our Annals, about A.D. 902.

† See Plate LII. On the other hand, the joint through a flight of steps at Staigue implies that the work was mainly of one period.

dress the sides to a straight edge before laying on the top slab,* and thus cannot be used for fixing any very definite date.

33. **The Older Legends.**—What can we say of the legends or even the annals? The oldest and clearest are doubtful for the remoter past, and the use of "building" for "rebuilding" is common. Nevertheless there may be a certainty apart from historic genuineness—circumstances favoured the preservation of genuine legends apart from names and dates—and the impression left by our early literature, as a whole, is certainly that some forts, both of earth and stone, were no mysterious and half-forgotten objects, but were built in the writers' day, while others were even then supposed to have been built in remote and even in fabulous times.

The Latin annals apply the word "construitur" to the building of a fort, and speak of such structures as existing long after their "destructio" and "demolitio" were recorded, thereby implying an entire rebuilding in the historic period. Some particular cases will be extracted hereafter; meanwhile it may be well to note a few of the legends in less historic works.

Of course, we cannot, like Eugene O'Curry, gravely treat all (if we can treat any) of such legendary statements as hard fact. O'Curry and not a few other ardent students of later days seem to be strangely devoid of even elementary critical feelings; else how could a poem of the seventeenth century be gravely quoted for facts of the fifth century or even a thousand years earlier, and such descriptions as that of Bricriu's "grianan," with its glass windows, have been cited to illustrate ancient Irish residences? Even the mention of a "rath-maker," or "cashel-builder," in a really ancient work, carries little conviction, for the "Book of Leinster" mentions Ileam, Solomon's cashel-builder, and Buchat, the rath-builder of Nimrod. We do not wish to quote more than a few of the allusions to forts, and select, in those cases, legends of actual value for elucidating the building or features of early forts apart from mere mention of a name or legend.

The Grianan of Aileach is alleged to be of great antiquity, "authorities"

* Journal R.S.A.I., vol. xxviii. (1898), p. 356. Later experience has confirmed these observations by traces of hammer-dressing on several other dolmens.

varying in placing its foundation from 1700 to 670 before Christ. The Dagda, "Eochy Ollahir divided all Ireland between his sons; greyer than the grey mist was the man": he also had determined to build a notable fort. "Hereupon were brought the two good men in art expert—Garvan and Imcheall"; he told them to build "a rath of beauteous circles . . . Active Garvan proceeded to work with art and to chip. Imcheall placed a scaffolding of wood (or proceeded to cut the dressed stones) round the building, and finished the erection of the dangan of Aileach." "The oldest of the works of Erin is Aileach Frigrinn."* We may further learn from the Dindsenchas that the stones for the building were drawn by horses. The same work tells of the building of Emania, about 400 B.C., its plan marked out by Macha, daughter of Cimbaith, with her brooch, and dug by her rivals; and the Book of Feenagh tells of a caher built about the same time (a fastness and a stone cashel) at Feenagh. Art, son of Setna, excavated the ramparts of Dun Ailenn in Kildare, and it was finished by Fiach and Ururus. In the first century B.C., Rathcrogan was made by Eochy Fidleach, father of Queen Maeve. The three chief rath-builders of Erin (Nas, Ronc, and Alestair) to redeem their lives, forfeited to Eochy, son of Dua, for a supposed slight on his daughter Taltiu, built for the princess the forts of Naas, in Kildare, Rathruinc, in Connaught, and Cluanalestair, on Slieve Callan, in Clare. Curoi, son of Daire, a generation later, by the treacherous counsel of his wife, dispersed his clans to erect Caherconree with "every pillar-stone in Erin whether standing or lying."† In the Christian era, Tuathal Techtmar founded Usnach about A.D. 80, while Luighdech Eithlenn built (or restored) Naas about A.D. 277.

In other works we find of Tara that (except for a few structures of fabulous antiquity, such as Caher Crofinn, the fort of Cuchullin, and the triple fort of Nessa, mother of King Conor, in the first century B.C.) the majority of the buildings dated from the time of Cormac Mac Airt, in the possibly semi-historical period of the third century of our era.‡

* "Dindsenchas," *Revue Celtique*, vol. xvi. (1895), pp. 41–42. Ordnance Survey of Ireland, Parish of Templemore, Londonderry, vol. i., pp. 223–227.

† "Dindsenchas," *Revue Celtique*, vol. xvi., p. 279; vol. xv., pp. 309, 463, 317, 448.

‡ Trans. R.I.A., vol. xvii. Journal R.S.A.I., vol. xxiv. (1894), pp. 233–240.

34. **The Historic Period.**—To come to historic times, Laoghaire, King of Ireland, in the early fifth century, made a rath (which is again called after his name) on the southern slope of Tara. Luirig forcibly built a caher at his brother's monastery, A.D. 513–534.* Grianan Aileach was destroyed by Finnsneachta, son of Donchad, King of Erin, A.D. 674, and demolished by the Danes in A.D. 937, and again by Murchad O'Brien in A.D. 1101; this implies at least two rebuildings in the seventh and tenth century, yet the remains are very primitive. Dun Onlaig was destroyed in A.D. 700, and rebuilt in A.D. 710 or 714.† Caisteal Mac Tuathal, in Scotland, a fort of early type, was built by a chieftain, Tuathal, who died in A.D. 865; Grianan Lachtna, a fort of earth and stonework, was built on Craglea, above Killaloe, by King Lachtna, great-grandfather of Brian Boru, before A.D. 840.

King Brian, at the close of the tenth and dawn of the eleventh centuries, strengthened the duns, dangans, crannoges, and royal forts of Munster. He built Cashel, Cenn Abrat, Duncrot, Kincora, and Boruma, Duntrileague, Dun Cliach, and Island forts at Lough Gur and elsewhere.‡ The stone fort of Kincora was demolished in A.D. 1062; and again in A.D. 1098, when its stones and timber were thrown into the Shannon; so evidently a true caher had been built and rebuilt in the eleventh century, even if the other caher on Lough Derg, which gave its name to King Conor na Cathrach (A.D. 1080–1120), was not, as has been alleged, actually built by him. Lastly, Donchadh Cairbreach O'Brien, Prince of Thomond, built his "princely circular palace of earth" at Clonroad before A.D. 1240, and we find the rath further defended with a 'mur,' or stone rampart; about A.D. 1287, at which date his descendant, King Turlough, strengthened it with a peel tower.§

35. **Familiar to the Early Literary Men.**—Apart from the allusions to traditions of the early fort-builders, one feels in reading the works of the pre-Norman poets and monks that a caher, or rath,

* Irish "Nennius," p. 181.

† "Ann. Ulster" and "Ann. Four Masters."

‡ "Wars of the Gaedhil with the Gaill" (Ed. Todd), p. 141.

§ "Wars of Turlough," 1240, 1306.

was a mere familiar object of daily life, not simply a relic of the remote past. The Book of Lecan (p. 17) copies an authentic poem of Seanchan, *circa* A.D. 640, which mentions a battle fought in Burren, in county Clare, "from cloch comuir, the stone of meeting, by the three mounds of walled fortresses"—an evident allusion to triple forts, which find a more curious illustration in an ancient description of the Heavenly City, which evidently was founded on recollections of a triple caher, each enclosure one-third larger than the last, and a square fort in the centre,* like the cahers near Tuam. Nothing but great familiarity with such buildings in both poet and audience could have led a bard to illustrate the size of a huge ollapiast, or monster, by stating that "its ears were larger than the gateway of a caher."† "The Battle of Moylena"‡ sings of the building of "three strong duns, three lofty murs of assembly, and three strong cahers." "The Battle of Ventry" tells of the destruction of three cahers—Dun Cais, Dun Aedha, and Dun Cearban—each with thrice fifty men in it, besides women and children, horses, and dogs; and, as these lie west from Ventry, Mr. R. Macalister is most probably right in identifying them with the three larger ring forts of Fahan.§ These allusions, not intended for the learned, but for a company wanting amusement, were surely proofs that the fort was a living and familiar institution even in later mediæval times.

36. **Gradual Desertion of the Forts.**—Even so early as when the Calendar of Oengus was written, some of the forts were deserted and ruined. Of course, some important forts had been destroyed or deserted from early times:—Emania fell in a raid of the three Collas in A.D. 321;‖ Tara before the blight of St. Ruadhan, about A.D. 563;¶ Rathcroghan ceased to be a palace in A.D. 645; Naas was deserted in A.D. 904, and Aileach in A.D. 937; Kincora was destroyed finally in A.D. 1098. But

* "Leabhar Breac," in Todd Lecture Series, R.I.A., vol. iii., No. 830.

† "Hunting of Sliab Trium," p. 115.

‡ "Battle of Moylena," p. 79.

§ Trans. R.I.A., xxxi., p. 313.

‖ Or 331. Tighernach gives the date as 322, and the Four Masters 321.

¶ "Annals of Clonmacnoise" (Ed. Rev. Denis Murphy), p. 87.

more plainly than these exceptional cases comes the generalised statement of "Oengus"*: "Guilty gentiles are carried off, their raths are not dwelt in. . . . Eman's burgh has vanished, save that its stones remain.† . . . The gentiles' ancient cahers, whereon great duration was wrought, they are waste, without adoration, like Lugaid's house-site."

At a much later date (A.D. 1317), as we have pointed out, the cahers round Ruan, in Clare, were grass-topped; and in Prince Donchad's despairing muster, before the battle of Corcomroe, that same year, "even every man in a caher's souterrain" was summoned.‡

Peel towers were built in a few ring-forts, such as Cahercloggaun and Ballyganner, in Clare; Cahercullaun and Rahinnane, in Kerry; Inishere, in Aran; and on the great motes, as Knockgraffan, Dunohill, and Kilfeakle, in Tipperary, in A.D. 1192; Durrow, and more than one mote in Louth. The Desmond's Castle, at Adare, in Limerick, was planted in an early earth fort in the thirteenth century.§ Askeaton Castle, in the same county, stands on the island where probably stood the fort of Gephthine, named in the Book of Rights,‖ Dunamase on the fort, which probably was known to Ptolemy as Dunum. While round the headlands of our coast many a promontory fort was strengthened by walls and towers—Dun Cearnmna to the south and Dunseverick to the north—two out of the three oldest fortresses of Ireland, if the Triads are true; Ferriter's Castle, in Kerry; the shattered walls of Dunlecky, in Clare; and probably the nearly isolated Dunluce, in Antrim, are on ancient sites. Even the fortified islet was not neglected. King Torlough O'Brien (after A.D. 1287) built a peel tower on a small island, with traces of ancient piling, in Inchiquin Lough, in Clare, and other lakes in the same county had similar buildings. Castle Hag, in Lough Mask, and Doonvinalla promontory fort, Mayo, are virtually mortar-built cahers.

A very full account of an ancient caher, with its great house, kitchen,

* "Calendar of Oengus" (Ed. Whitley Stokes), p. 18.

† See *infra*, section 71.

‡ "Wars of Turlough."

§ "Memorials of Adare" (Lady Dunraven), plan of the Castle, p. 105.

‖ "Book of Rights," p. 89–91 n.

gateway, &c., recalling the monastic caher in the Tripartite Life of St. Patrick,* was written down in a partition deed of the O'Davorens of Cahermacnaughten, Clare, in the reign of Charles II., 1679;† while, in the same primitive district of the Burren, the forts of Ballyganner and Caheranardurrish were inhabited, at any rate, till 1840, and the caher of Balliny, not far away, is inhabited, and likely to continue so even in the twentieth century.

37. **The Age of Forts from Other Sources.**—It is interesting to note that in cases (all unfortunately outside our island) we are able to fix at any rate a minimum date for certain forts, and that the date fixes their origin to periods comparable with the Irish legendary statements. For example, in the far east of Europe finds of the early Bronze Age have been found in the forts, under circumstances connecting them with the inhabitants of the fortresses, so far back, it is stated, as the tenth or twelfth century before our era. In Brittany and in Switzerland (and some also suppose in Scotland), there is unmistakeable evidence that Roman occupation of the forts took place in the early centuries of the Empire, as, for example, in Castel Coz, and the great earthen "Lisses" at Caudebec, Gaulish in origin, one occupied by a Roman villa.‡ The dry-stone ramparts of Vercingetorix, Caractacus, and others in Gaul and Britain will occur to readers of Cæsar and Tacitus. It will also be remembered that these structures were built in the first century B.C., and its successor, the very period when, according to Irish legends, the Huamorian forts, Caherconree, Rathcroghan and the Treduma Nesi at Tara were constructed. If, indeed, the smoother surface of the gateway passage of Grianan Aileach owes its better preservation to shelter, and not to the selection of smoother blocks by the builders; it would

* See *infra*, section 42. "The Tripartite Life of St. Patrick" (Ed. Whitley Stokes), p. 44, uses 'cathair' for an enclosed monastery, "Thy cathair on earth shall be low," p. 74, "build a cathair on its brink"; but the word is also used for a lay building, p. 112, "That he should take a cathair at Achad Fobuir." The Patrician Monastery is described, p. 237 and p. civ.

† Journal, Roy. Soc. Ant. Ireland, xxvii. (1897) p. 121.

‡ See also Revue Archéologique, vol. xvii., No. 16, for an account of a Roman camp over a Gaulish stone fort in the department of Lot.

imply a considerable antiquity for the fort; and as already mentioned, the less equivocal weathering of the tops of the pillars at Dun Aenghus and Ballykinvarga tells a tale of great age, perhaps slightly modified by the undoubted weathering and channelling of the upper surfaces of the bases and arms of crosses dating from the tenth to the twelfth centuries. The rock-cut fosses at the King's Chair and the Rath of the Synods at Tara are deeply covered with earth; and the late ill-starred search for the "Ark of the Covenant" laid them open, and disclosed a probable Pagan burial in a rampart of the former mound, in which the bones had been taken asunder and packed together with the skull underneath.

38. **Finds.**—Flint implements have been found in many forts. Arrow-heads, with, however, a brooch considered to be of the fifth or sixth century, were found in Dun Aenghus. Arrow-heads were also found in Cahermacnole (Cahermackirilla), Clare, Rahinnane, Kerry, and in several of the raths near Galway Bay, and in Waterford and Kilkenny. A beautiful polished stone axe was found beside a fort near Mullingar,* and basalt axes, granite spear-heads, and flint arrows in Dungorkin. I found a small chipped flint in the so-called Dun Criffan, a promontory fort on Howth.

Gold (as a rule, of the Bronze Age) has been found in several forts. For example a gold fibula was found in Rathkenny, near Cootehill; and two splendid torques were found on Tara Hill.

If we could connect the "great Clare gold find" with the inhabitants of the neighbouring cahers of Moghane and Langough, experts would consider those forts as dating from four or five centuries B.C., but the question does not admit of profitable discussion in this essay. A gold bracelet was found covered by an earthen vessel in the fort of Lisline, near Tramore, Waterford, before 1746.†

Bronze must be discussed with equal caution, for when Brian Boru captured the Danish fort of Dublin, he found "a great quantity of bronze" among the other spoils, A.D. 1000.‡

* Laid before the Academy, March, 1901, by Mr. G. Kinahan.

† Smith's "State of the County and City of Waterford," 1746, p. 98.

‡ "Wars of the Gaedhil and Gaill," p. 115.

Bronze not referable to Christian times has been found in many forts. A socketed celt was found, it is stated, in a fort near Lough Derg, in eastern Clare. We have seen the object, but could not ascertain the actual locality. A stone mould for casting a beautiful bronze spear-head, fluted, and with two loops, was found built into the wall of the caher at Knockgarranbane,* near Clarinbridge, at the head of Galway Bay; but this, far from fixing a date, may only imply a rebuilding after the metal and style of weapon had gone out of use. The Dunbell raths yielded bronze and jet as well as stone objects,† and the second cashel amid the wonderful cists and trilithons of the Deerpark,‡ near Sligo, yielded a bronze "buckle." Bronze implements have been found at Tara.§ Later bronze objects, such as the brooch found in Dun Aenghus, the bronze sword label with the runic inscription, "Domnal Selshofoth a soerth theta," "Domnall Sealshead owns this sword,"‖ found in the mote of Greenmount, in Louth, or the bronze slip with late mediæval lettering found in the Dunbell rath, tell us as little about the date as the silver coins of Edward II., found in the abattis of Ballykinvarga, or the base Tudor coins found inside Cahermacnole, along with the pointed flint implements. These manifestly serve as little for a date as the golden torcs found at Tara, or the beautiful chalice in the rath of Ardagh, county Limerick.

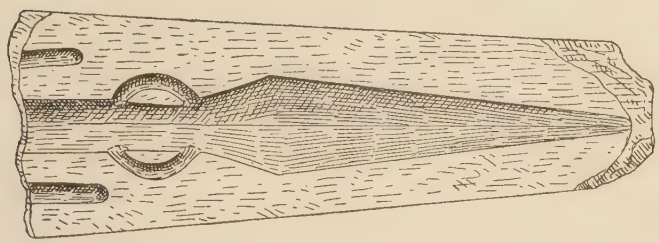

FIG. 8.—Mould for casting Spear-head, Caher, Knockgarranbane.

Iron has been frequently found in forts; it is said to have been dug out from a considerable depth in the forts of Tara, and to have been found in a demolished wall at the triple fort of Cahercalla, near Quin, in Clare.

* "Archæologia," xv. (1805), p. 394, Plate xxiv.

† Journal R.S.A.I., vol. iii. (1854), pp. 133, 175.

‡ *Ibid.*, vol. xxi. (1891), p. 581.

§ Proc. R.I.A., Ser. III. (1870–1879), p. 25.

‖ Journal R.S.A.I., vol. xi. (1870–71), p. 487.

Iron axes were also found built up in the walls of Caherspeenaun and Caherbiel, near Cong, on the borders of Mayo and Galway.* We have found primitive "corn crushers," long hollowed stones, at Caherahooan, Moheramoylan, and Ballyganner cahers. The pottery found in the souterrains and forts, as those of Waterford and Kilkenny, is of the rudest description. In short, like the legends, the actual finds fix no "fort-building period," but show during how vast a period these structures were actually raised in Ireland from "the twilight waste where pale Tradition sits by Memory's grave," to the time of Henry III., and in continental Europe from the days of the strong men before Agamemnon to the days of the Crusaders.

39. **Theories regarding the Fort-Builders.**

The Sons of Huamore.—The Firbolgic origin of the cahers has been impressed on Irish Archæology by the great names of Petrie and O'Donovan, supported by Lord Dunraven and Miss Stokes, popularised by many writers and accepted by a large body of antiquaries without any thought of the vast impossibility involved in the legend and its hopelessly weak foundation. Even if the legend of the sons of Huamore be not a sun myth, as Professor Rhys suggests, even if it rested on some earlier and better authority than (it should appear) a poem of the tenth century, still, the story in that poem is alone enough to undermine the popular belief; and it is surprising that any of the above antiquaries should have been carried away by so wild a theory. We are called on to believe that several hundred, if not a couple of thousand, stone forts were built by a handful of fugitives who were able to live in nine raths in Meath, and were exterminated or scattered in a year or two after settling in Galway, Mayo and Clare. The prose version only names Dun Aenghus; the poem in addition tells how Ennach built a fort in Clare in the neighbourhood of Dael; and one manuscript adds "thus they dwelt in fortresses." On this tiny base the vast inverted pyramid of theory which attributes the cahers of Kerry and Cork to a tribe never even stated to have settled in those counties, and the innumerable cahers of Clare, Galway, Mayo, Sligo, and other districts, to this short-lived little band. After this utter impossibility, the question of

* Sir W. Wilde, "Lough Corrib," pp. 330-338.

the historic value of the legend sinks into unimportance; and the question of the vast labour implied in the building of even a single large caher, or the fact that the principal centres of Firbolg legend display earthen, rather than stone, forts, may be disregarded.

The Sea-Rovers.—In a natural reaction against the last overweighted theory, some, with more apparent reason, attributed the great stone forts to sea-rovers. As with the advocates of the former view, it would almost seem as if the authors of the "rover theory" only thought of the forts described by Lord Dunraven, and overlooked the many thousand enclosures in nearly inaccessible valleys, and on plateaux far from the sea. Many of our promontory forts are on headlands flanked by harbourless and precipitous coast for many miles. Why did the "wanderers on the whale's path," who were very practical people, devise such useless and inconvenient abodes, while they never seem to have built any such great fortresses to hold the rich meadows of the Shannon and other rivers most suitable for the safety and convenience of their ships, and more profitable either for plunder or settlement.

The Danes.—Giraldus Cambrensis, with countless other errors, originated the theory that our raths and lisses had been made by the Danes.* This was developed and published by Thomas Molyneux in the eighteenth century, and has never died down, nay more, has been spread wide-cast amongst the peasantry, and received the sanction of not a few of our later writers. We may well ask whether the Norsemen on principle adopted a style of fortification abundant in lands where the ravens of Odin never preyed, and whether the invaders carefully fortified districts in which they never settled, or, so far as our records extend, never overran, while erecting no such works in their own country or Iceland. We can only recall one really great Irish fort (Moghane) in a Danish district, and it is never mentioned as having been used in the deadly guerilla warfare of Brien in the woods of Tradree at the end of the tenth century.

* It has been a growing custom since, at any rate, 1868 (R.S.A.I., ser. iii., vol. i., p. 22), to state that Dane is a mistake of the peasantry for Danann. There is no evidence for this, and the peasantry probably derive it from conversation with the followers of Giraldus and Molyneux. The Scotch peasants, however, used to attribute the forts to the Danes, as does the elder Borlase in "Antiquities of Cornwall." See M. Martin's "Western Islands of Scotland," 1703, p. 34.

Other views.—The theories attributing our stone forts to Phœnicians or monks are practically dead. The Vallancey school failed to prove its case, and modern archæology seems to have cast very grave doubts on the existence of any regular Carthaginian commerce with Ireland, where it certainly left no indisputable trace. The monks certainly built stone cashels, but usually of irregular plan and without terraces or steps. A very interesting relic of these builders is found at Termonfeckin in Louth—an inscribed stone with the inscription: Oroit do Ultan 7 do Dubthach do rigni in cairpel, "Pray for Ultan and Dubthach who made this stone fort."*

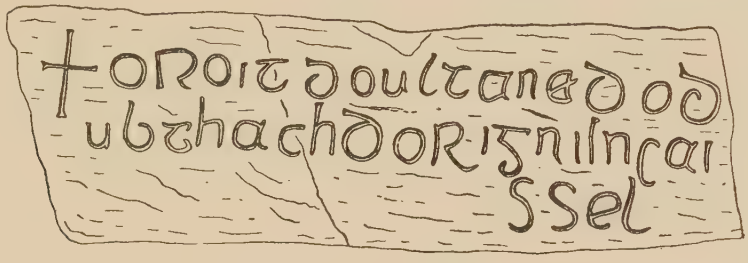

Fig. 9.—Fort Builder's Monument, Termonfeckin, Louth.

It was more usual, however, for the monks to build their "cathair" or "conghabhaile" in some existing fort which some newly converted chieftain gave to God and the Church. Skellig, Caher Island, and Magharees, Glendalough, and Sier Kieran are good examples of the former class of works. Cashel in Cork, Temple na raha near Ruan, Clare (where the foundations of a venerable oratory lie within a ring-wall of massive blocks), the Rock of Cashel, Innismurray, and, possibly, Rathmichael in Dublin, were secular forts before they were granted to the monks.

IV. Use of the Forts.

40. The most widespread views regard the forts as fortifications or as cattle bawns, and each contains a certain element of truth. The idea that they were places of burial, though apparent both in our literature and the

* "Christian Inscriptions in the Irish Language" (Miss M. Stokes), vol. ii., p. 70.

ruins has been less advanced. Popular legend of our own time supports, in some cases, Spenser's statement* that some of the forts were places of assembly. Other legends, found at Moghane and in Germany (also in "Marmion"), consider the forts as places for tournaments and combats, and this view has been elaborated by Vallancey in his account of Staigue fort. One writer fancies that the latter may have been a Phœnician emporium connected with certain traces of ancient mines, while others fancied it a temple or observatory. We only deal here with the first three and the temple and assembly theories.

41. **Fortresses.**—The first two theories, like most half truths, obscure some points and raise some unnecessary difficulties. In the first place, the modern (or mediæval) notion of a "fortress" is so complex and so different from a Celtic fort that it is better to dismiss the idea from our minds, and to think of the cahers and raths as moated or walled residences such as were common at all times in insecure states of society. In their inclosures stood, as a rule, groups of small houses: in other cases the whole space or summit must have been occupied by a single large house. The strong wall or palisaded earthwork was merely a passive defence for these houses, and was only raised against a sudden attack, not against undermining, battering, or other siege work. In short, the house or group of houses forms the essential feature of a Celtic fort; the rampart or earthwork was merely an accessory. Even in Algeria many a supposed prehistoric trilithon was more probably the gateway of a demolished dry-stone "cashel" which defended a farmhouse early in our era.

In view of this design, the reasons often urged as to the impossibility of certain apparent facts, such as the building of the wall in two or three sections, and the excluded water supply, lose all weight. The picture of the Ventry forts† crowded with people and animals, and taken by storm and burned, is probably true to fact. The dependents lived round the fort, and would have naturally crowded into it on any alarm. We find in Kerry and Aran, where timber was scarce, both single huts and groups in the fields

* "View of the State of Ireland." This is borne out by the Annals of Ulster, A.D. 803: "An Assembly of the senators of the Ui Neill in Dun Cuair."

† "Cath Finntraga" (Ed. Kuno Meyer), pp. 5, 6.

round the forts or in their garths. In Clare, on the other hand, where wood was plentiful, even in Burren, few huts or traces other than the boundary walls of the enclosures, and more rarely slab basements,* remain in or near the cahers. The Anglo-Saxon 'town,' with its hall and huts crowded together in the midst of the cultivated land, affords a close analogy, but instead of a single fort, as in England, a group of so many as ten or twelve fair-sized forts might remain within call of each other in Ireland.

In the legend of the three forts near Ventry, each of these settlements fell by itself. There was no attempt made to join forces against the invaders. This lack of organisation was probably common, and was possibly based on the rarity of successful attack, as the examples of the storming of forts are comparatively few in Irish literature. It is easy to see how, in an undisciplined raid (indeed we have noted it recently even in modern warfare), raiders were more anxious to sweep away cattle and plunder from the open country and unfenced villages than to assail (still less besiege) even slightly fortified places. Save that the "glory" to be gained by sacking the residence of a king or chief led to an assault and the destruction of his house, our annals would be nearly devoid of such incidents. As it is, the very same assailants seem to have swept past dozens of other forts without attacking them.

One more fact of interest needs to be recorded. The caher of Balliny, near Black Head, Clare, has been inhabited from beyond human memory down into the twentieth century. We see it with its houses and enclosures both inside and surrounding the ring-wall. Looking on the simple life of its inmates, we are compelled to feel how much nearer it is to the life of even a pre-Christian settlement than it is to the life of its contemporaries in the great cities far away.

42. **The Ecclesiastical Cathair** was (save for its churches and crosses) nearly identical in its arrangements with the dun of a secular chieftain.

* Professor Sullivan's Introduction to O'Curry's "Manners and Customs" makes the startlingly incorrect statements (p.74) that no clochauns remain round the forts of Aran, and that there was no building material in Daelach, in Clare, except stones. The fact was that thick woods existed down to the eighteenth century, and trees still grow freely, as even the maps clearly show.

Indeed, in the first generations of Christianity in Ireland, we read of circular churches* with crosses, or a holy word "Jesus," or "Soter,"† rudely engraved on the pillar-stones which often accompanied a lay fort; and such features must have greatly added to the similarity. When a chief gave his fort to an early missionary, the latter probably did nothing to alter the structure of the establishment. The monastery was organised on tribal lines; the great hall became a church; religious observance took the place of festivity; the huts of the retainers outside the fort were filled with catechumens, but, in other respects, the rude and simple life of the community probably differed little from that of their predecessors.

In the "Tripartite Life of St. Patrick"‡ we find a description of a monastic cathair presumably as existing in the latter half of the fifth century: it consisted of a great house, a church, an "aregal," a kitchen, a "pranntech" (refectory), a guest-house, and a graveyard; the whole was enclosed by a "vallum." The saint on one occasion laid out a rath 140 feet in diameter, and, a little later, St. Enda, brother of St. Fainchea "made deep fosses round her monastery."§

To show how unaltered was this type over twelve centuries later, we may take the enumeration of the buildings in Cahermacnaughten, Clare, as described in the will and deed of partition made by Gillananaeve O'Davoren in 1675.‖ The structure still remains, a very massive, and probably prehistoric ring-wall, some of whose crowded house-sites can still be sufficiently identified to enable us to follow the description. The "keannait" contained "the site of the large house of the caher within, the site of the kitchen house, which belongs to the house within the caher, and the site of the house of the churchyard on the west side of the caher, and all the gardens extending westward from the road of the garden of Teige Roe MacGillapheen (not including Teige Roe's house and garden), the house site between the front of the large house and the door of the caher at the N.-W. (*sic*), and the large house which is outside the door of the caher." Save for the lack of a church, and one existed west of the caher at no great distance,

* Doubtless closely resembling in external appearance certain Abyssinian churches.

† "Tripartite Life of St. Patrick" (Ed. Whitley Stokes), p. 107.

‡ *Ibid.*, p. 237. § Acta SS., Jan. 1. ‖ Journal R.S.A.I., vol. xxvii. (1897), p. 121.

this might read for the description of a monastic caher in the days of Hengist, rather than a law school in the days of Newton and Milton.

The similarity of Skellig Monastery to the secular cahers and huts at Fahan is very marked ; the huts may be reckoned a little better, but not more so than Gallerus oratory is to the ruder oratory on the great sea-rock.

43. **Cattle Pens.**—This theory only errs in being too sweeping. Doubtless many of the slighter ring-walls and straight walled "mohers" were for cattle; but who would think of building a fort like the Grianan or Dun Aenghus, Moghane or Staigue, Ballykinvarga or Dunbeg, for such a purpose?

The bawn, or boen, was usually distinguished from the residential fort by being of less imposing massiveness and having no terraces or steps; little more was attempted than to establish a place for cattle, lofty enough to exclude the wolf and strong enough to be an obstacle to the robber. It was, however, not unusual to keep the cattle in the residential fort; we find this in legend, as in the case of the cattle of Iuchna the curly-haired,* and in that story, so often quoted, of the three forts of Ventry. What is stronger evidence is that the ancient laws of Ireland made provision for seizing cattle kept in forts, and even for keeping them impounded therein on dark nights.† That this extended to later times we have seen in the fort-names Cahernagree, Lisnagry, &c., and perhaps even in the "pounds" of Dartmoor and the local name for Staigue fort "Pounda-na-Staigue."

44. **Sepulchral.**—As regards sepulture in forts, we find abundant examples both in early Irish literature and in the ruins themselves.

Of course, in this place, as always through this paper, the extracts are quoted to illustrate customs or the structural features of the forts without any question as to the historic truth of the relation. In the legend of the battle of Moytura-Cong we hear how Slainge pursued the sons of Caelchu and their followers, when they fled from the left wing of the Tuatha De Danann and slew them near the margin of Lough Corrib, setting up

* "Silva Gadelica" (S. H. O'Grady), vol. ii., p. 131.

† "Senchas Mor," vol. i., p. 131, for joint labour on forts; p. 137, for provisioning forts; vol. ii., p. 61, cattle can be kept in forts on dark nights.

seventeen flagstones over their graves. These slabs Sir W. Wilde identifies with thirteen slabs still standing in an oval fort on the shore of that lake.* The "Colloquy of the Ancients" mentions "a fort, within this again a colossal sepulchre."† The Lady Téa, wife of Erimon, was buried in the fort of Tara in imitation of another princess, Tephe, daughter of Bachter, King of Spain, buried in the "mur" of Tephe, in Spain.‡ In the same work we find the cashel of Aengus, son of Cruindmael, among the burial-places of the Brugh na Boinn. Crimthann, son of Lugaid, dying of his fatal love for the Banshee Nar, was buried in his fort on Howth,§ while the bones of some 10,000 slain soldiers of Cairbre Liffechair were buried in the rath of

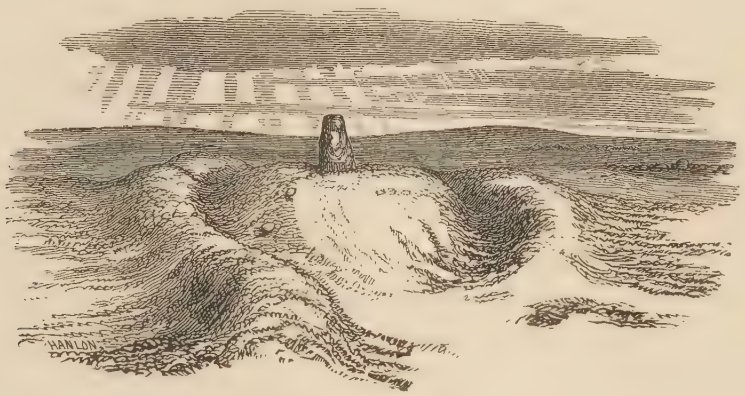

FIG. 10.—"Tomb of Dathi," Rathcroghan.

Cnamross.‖ In more historic times we find King Dathi's tomb at Rathcroghan to be a small fort with a fosse and pillar stone, and King Laoghaire, son of Niall of the Nine Hostages, was buried upright in the rampart of his rath, armed, and with his face turned towards the land of his enemies, in enmity unappeased by death. It is remarkable that an interment was found in the rampart of a rath, the King's Chair, at the same place.

* Since the date of this paper Mr. P. Lynch showed me a plan and views of a most interesting monument in Kerry, an arc of a small ring wall with a "chord" of pillar stones, probably sepulchral. It is intended to publish it in the Journal R.S.A.I.

† "Silva Gadelica," ii., p. 131.

‡ "Dindsenchas of Tara," *Revue Celtique* (1894), p. 277; the more usual version was that Tephe was buried at Tara, and gave *it* the name of "Tephe Mur."

§ *Ibid.*, p. 332. ‖ *Ibid.*, p. 333.

The remains themselves tell the same story. The ancient cemeteries at Usnach and Rathcroghan are scarcely distinguishable from ordinary ring-forts, and may have been first designed for residence. We see a dolmen in the middle of the vast earthwork of the "Giant's Ring" in Down, and others in the ring-walls of Ballyganner and Creevagh in Clare, and a rath near Kilpeacon, Limerick; while the "Doon fort," on a bold headland south of Dingle in Kerry, encloses a "giant's grave." A double cist remains in the levelled fort of Kilcameen, near Kilfenora, Clare. Molyneux* mentions and figures an urn found in a cist in a "Danish" fort at Stillorgan, Dublin, in June, 1716. Rude pottery and numerous human bones were also found in a cist in the great rath of Rathcoran, Wicklow, on a lofty hill above Baltinglas. These facts did not escape the well-stored mind of Sir Samuel Ferguson, who, in one of his best known poems, uses it with fine effect:—

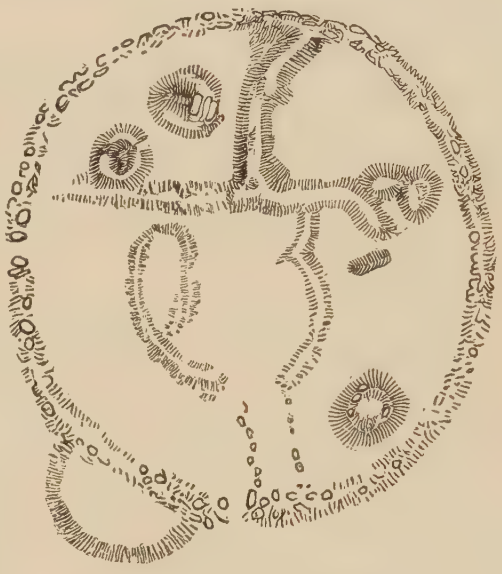

FIG. 11.—Cemetery of Rathcroghan.

"No more—dispelling battle's gloom—
Shall son to me from war return,
The great green rath's ten-acred tomb
Lies heavy on his urn."†

Pillar-stones in raths are not uncommon in Munster, and occur in a stone fort at Edentinny, Leitrim.‡ Ogham-inscribed stones have been found

* "Danish Mounts," p. 201.

† "The Cromlech on Howth." Urns are frequently found in earth forts.

‡ O'Hanlon, "Lives of the Irish Saints," vol. iii., p. 581. We have noted an example in Yorkshire, *supra*, section 30.

in forts, as at Doonmore, Kerry, and Lisheenagreine, Cork.* Cairns occur inside ring-walls at Ballyganner (near the enwalled dolmen), and a small one in Caheranardurrish fort in Glensleade, Clare, was recently demolished, and disclosed a small cist of at least three compartments, the finds being thus in complete agreement with the allusions in our oldest legends and history.

Burial in one's fort or house was an ancient and widespread custom; the ancient princes of Mycenæ and Iberia were laid in state within their palaces. Even among the Israelites, who dreaded defilement from the dead, Joab was buried "in his own house in the wilderness." We have noted cairns and burial mounds enclosed in the ancient forts of Ograch and Malagradina in Bosnia;† while the stone fort of Ismanstorpsborgen in Sweden is crowded with ancient burials.‡

This tradition has probably led to the usage of numerous earthen and stone forts for burial in Ireland, sometimes for general burial, sometimes only for the burial of children or for unbaptized infants.

Finally, in the case of the motes, several have yielded evidence of burials, even the complex mote of Greenmount in Louth. Waringstown "Dane's Mound" in Down, when opened in 1684, yielded a handsome urn covering burned bones and charcoal in a beehive cell with a passage 10 feet long.§ In these cases the unaccountable neglect with which these very interesting antiquities have been treated prevents our generalizing; and we leave for fuller light the question whether the defensive mound was eventually used for burial or the sepulchral mount adapted for defence.

45. **Worship.**—This is a problem too important to be passed over, and too obscure to be treated with more than the slightest allusion. We have seen the weighty name of Virchow attached to the theory that the fort with an annexe was an ancient temple, and the resemblance of the shrine of Suantowit at Rugen to one of the promontory

* Trans. R.I.A., vol. xxxi., p. 279, and R.S.A.I., ser. iii., vol. i. (1868), p. 260.

† "Bosnia-Herzegovina," Dr. R. Munro, pp. 197, 203.

‡ "Dolmens of Ireland" (W. Borlase), vol. iii., p. 1133, and *supra*, fig. 4.

§ "Ancient and present state of the county of Down, 1744," p. 212.

forts has been pointed out, while Cormac Mac Airt is said to have been worshipped at Tara. The remains throw little, if any, light on the subject. The mote of Skirk in the townland of Newtown Skirk, Queen's County (O. S., map 21), has a circle of upright stones, which Sir Charles Coote* says enclosed an altar, and, like a defensive mote, had a conical mound of earth and stone, circumscribed by a rampart or ditch. Human bones and urns were found "when the altar or mound is opened." Coote goes on to quote Vallancey's unfounded assertion that such places "were called Magh Adhair, the sanctuary of the wise divinity of the tombs, and were dedicated to Magh or Sodorn and the manes of heroes." It is probable that if any rites were celebrated, they were rather sepulchral than directed to the national deities.

46. **Ceremonial.**—Many forts became centres for aenaghs, great fairs and merrymakings of possibly religious origin. We need only name the Feis of Tara, and the aenaghs of Tailtinn and Carman; while such names as Caherwarraga, Ballykinvarga, and Eanty, attaching to forts, attest the existence of similar gatherings. The aenagh of Magh Adhair in Clare was older than the invasion of Thomond by King Flan Sunach in A.D. 877,† and lasted as a local gathering down to the Great Famine. It is still remembered by the older people in that part of Clare as taking place round the mote. Races were held down to the nineteenth century at a barrow and fort, near Mallow, but were then transferred to Ballyclough. The barrow on being opened was found to contain a fine cist, with a skeleton and bronze sword.‡ Indeed it is not impossible that the great present-day fair of Cahirmee may have owed its remote origin to some aenagh held at the ancient caher of that name.

The forts occasionally enclosed objects of popular veneration (if not formerly of worship), Magh Adhair, Clare, possessed a "Bili" or ancient tree, connected with the inauguration of the Dalcassian chiefs. Roevehagh in Co. Galway takes its name from a famous "Red birch tree" (Ruaidh

* "Statistical Survey of Queen's County," p. 92.

† "Book of Munster," O'Reilly, MSS., R.I.A., vol. iii., pp. 39–42.

‡ "The Early Age of Greece," Professor Ridgeway quoting letter from late Rev. T. Olden. For games at Caherachladdy, Cork, see Journal R.S.A.I., vol. ii. (1852), p. 231.

Bheitheach). The Clare tree was maliciously cut down by the Ard Righ Malachi in 982, and its very roots dug up. Its successor met the same fate from the troops of Aed O'Conor, King of Connaught, in 1051. The Roevehagh tree was cut down and its stone fort demolished by Turlough O'Brien, King of Thomond, in 1143, vendettas being long-lived at that period.

The fort of Tullaghog contained the inauguration stone of O'Neill, and the cliff fort of Dunadd in Argyllshire, with the basin stone and rock-cut footprint thereat, was used for the inauguration of the Dalriadic kings,* while other Irish forts (as Naas and Cairnfree) served a like purpose. The oblong fort at Edentinny, in Leitrim, has two large pillar-stones (one standing and one prostrate), the former 12 feet high, and has been supposed to have been a place of pillar-worship.†

V.—Structural Features in the Forts.

We now turn to the important subject of the structural features of the early forts. Leaving to Irish scholars the task of collecting the ancient nomenclature, a task which they have up to this neglected to perform, we may be permitted to turn to the buildings themselves, with no further preamble, using (as all through this paper) the facts we have collected from ancient Irish writings only so far as they seem to elucidate any features of the ancient buildings.‡

As might be expected, the earthen forts, although by far the more abundant, fall into the background in this section. Nearly all the "features," apart from the mere plans, being confined to the stone forts,

* Society of Antiquaries of Scotland, (1878–9), p. 28, paper by Capt. F. Thomas, R.N.

† Canon O'Hanlon, "Lives of the Irish Saints," vol. iii., p. 581. It is not marked in the townland on the Ordnance Survey map of 6-inches to the mile.

‡ Very few have been collected. We find in the "Mesca Ulad," Todd Lect. Series, R.I.A., p. 47, and Professor Sullivan's Introduction to O'Curry's "Manners and Customs of the Ancient Irish," p. 107, a few of the old names for various portions of the forts. As "tulchin," the flat top of a rath or mote: "iarom," the garth or enclosure; "mur," the rampart; "fordorus," the gate in the outer wall; "aurland," the slope before that gateway. We hope for more light on this interesting and important study from some of the many earnest students of Irish.

and being on that account taken in a vast preponderance from the counties in which lie the best preserved cahers, *i.e.* in Donegal, Cavan, Sligo, Mayo, Galway, Clare, Kerry, and Cork.

47. **Ramparts.**—In studying the structural anatomy of the walls, we not unfrequently meet the curious method of construction in which the face of the masonry exhibits continuous upright joints. These were at one time supposed (from the two joints occurring close to each other in Staigue fort) to have marked an opening left for the convenience of the builders, and afterwards closed; but numerous other forts, notably, those in Aran and Clare, exhibit many joints at approximately regular intervals and preclude the older idea. It is more than probable that each section marks the work of a different gang. This system was adopted by Nehemiah when repairing the walls of Jerusalem, and very possibly was not unknown in other times and countries.

In at least one interesting example, the fort of Caherdooneerish on Black Head, overlooking Galway Bay, we see marks of three periods, the joints running for perhaps 6 feet from the ground; other joints running at other places from 5 or 6 feet above the ground to 10 or 12 feet; and still other joints confined to the topmost part of the wall; other divergencies in the masonry being also apparent, which evidently mark at least two successive rebuildings.

The legends in the Dinsenchas tell us that the stones were drawn by horses or collected by the inmates of the fort, who took pillar-stones, both standing and prostrate; the blocks were "chipped" to make them fit better in the wall,* and (if the translation given by Petrie, in his account of Grianan Aileach, be correct) were put up with the aid of scaffolds.† With regard to the latter question, however, the occurrence of smaller stonework in certain forts, from a height of 6 or 7 feet above the ground, seems rather to imply that the stones were sometimes lifted by mere strength

* "Dindsenchas" (*Revue Celtique*, 1894) pp. 41, 42, 448. "Ordnance Survey of the County of Londonderry" (1837) vol. i., p. 226.

† O'Curry renders the line "proceeded to set them (the blocks) round the house," "Manners and Customs," vol. ii., p. 9.

up to the builders, who stood upon the wall, and by the aid of the terraces and steps, frequently occurring in the forts, such work could have been easily carried out without scaffolds.*

Signs of ancient rebuilding are not lacking. Sometimes a patch of the wall is of a poor and hurried character, the stones set on the slope and not fitting against the other blocks. A good example of this in the outer rampart of Cahercommaun has been illustrated.† Another very interesting example of rebuilding occurs in the caher of Langough in Clare. The central caher appears to have belonged to the original design and to have had a large annexe, pear-shaped in plan, covering the top of the rocky knoll on whose precipitous flank the ring-fort stands. Two long walls, which, after running nearly parallel to each other for 400 feet, turn inward and probably formed a loop, extend into the adjoining townland of Rathfoland. In the rebuilding, these long walls and the pear-shaped annexe were levelled, though the large foundation blocks remain, and in their stead was made a strong, but smaller annexe, crossing and covering the foundations of the older walls. Curiously enough, the radiating walls of the stone forts of Ballykinvarga and Cahershaughnessy seem to pass through the central ring-walls, but closer examination shows that their lines are alone continuous, and that they abut against the faces of the ring-wall instead of being covered by it as at Langough.

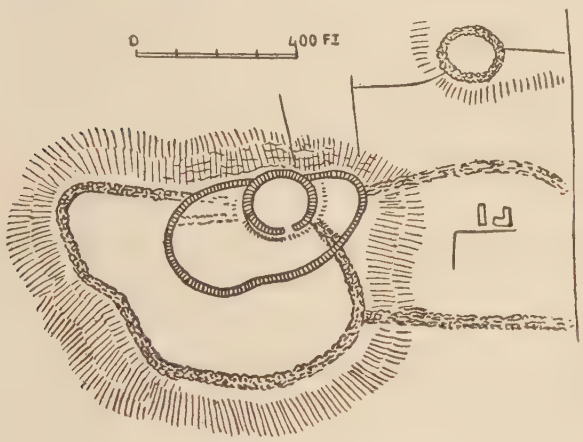

FIG. 12.—Caher, Langough, Clare.

The rampart, besides being built in longitudinal sections, was sometimes formed of a series of thinner layers, one behind the other, and each complete

* For this reason we greatly question the probability of the theory that the builders of the Cashel of Skellig stood on the stones projecting from the outer face of the wall over the steep descent to the sea.

† Journal R.S.A.I., vol. xxvi. (1896) p. 155.

in itself. This has been recently denied; but no one who saw the ramparts of Dun Aenghus before its "destructive re-edification," or the caher of Feenagh, in Burren, or (as we had the "sad good fortune" to see) the demolition of the upper caher of Ballyallaban, could have any doubt as to the fact. To argue that "it would weaken the wall against hostile attack" is beside the question; for escalade and capture, not the overthrow of the wall, was the besetting peril of the older fort-builders.

In Dun Aenghus, Feenagh, Caherbullog, and probably Ballykinvarga, we have seen the well-built face of the inner wall exposed by the fall of the outer portion; while at Ballyallaban, the two sections were separate down to the crag on which the fort stood. This was not, however, the usual method, which was effected by building two faces of large blocks, 4 to 12 feet apart, the outer face set to a slight batter, and filling the interspace with a packed mass of smaller stones; these eventually settling down distorted the even batter into a curve, simple or slightly S-shaped, and eventually, in certain cases, burst out the facing altogether; it also led to distortion and settlement in the upright joints,* and to the sloping inward of the top stones, and thereby the retention of wet in the walls. Altogether, it is a far inferior method than where the wall was built in layers where such destructive settlement is less apparent. It is very probable that later facings of wall were added in some forts—the cases of Caherbullog, Caherscrebeen, and Dunbeg, near Fahan, are evidently cases in point. In the first two it preceded the demolition of the inner and older ring-wall to the level of the garth, in order to widen the area; in the last it was evidently intended to contract the outer opening of the gateway and to strengthen the face; and, from the curious fact that it was a little lower than the inner wall, it was probably never completed. Dun Aenghus, early in the last century, possessed the unusual feature of a sunken way between the outer and inner faces of the upper part of the central wall.

The usual method of construction was evidently as follows:—The laying out of a roughly circular area, marked with foundation blocks. Such a marked-out semicircle may still be seen near Cahernaspekee, near

* This is well seen in Lord Dunraven's large views of Staigue and Dun Conor, and the views of Caherdooneerish in Journal of R.S.A.I., xxxi., p. 4.

Ballyganner. Then, if no plinth was made, the foundation blocks were set and the facings continued upwards. The outer face was usually built to a straight batter with great neatness and skill and the filling laid or thrown in as the face layers were raised. In some cases other thicknesses of the wall were subsequently added, and where there was a terrace its steps were possibly utilised to bring stones to the builders working on the summit. In some cases various gangs worked on certain sections of the wall, which were not bonded, but only abutted against the contiguous sections leaving long upright joints.

48. Masonry.—The masonry varies with the rocks of the district. In cases where boulders abound, the stonework is rude, and the crannies packed with smaller stones; in shale districts, the facing is regular, but small, and has rarely escaped collapse, while in limestone districts the masonry is often coursed or polygonal, often as regular as ashlar, and sometimes showing traces of hammer-work. In Kerry we see igneous rocks, which break into "diamond-shaped" fragments, used with excellent effect to form a reticulated pattern. The regularity of the limestone blocks sometimes led the builders into neglecting to "break joint"; and as a result we see at Caherclogaun, near Lisdoonvarna, closely occurring upright joints a few feet apart.*

Another kind of masonry, though somewhat rarer than the more or less oblong blocks, is the "cyclopean." To it such undue importance has been attached, that it has come to be regarded as the common type of masonry in our ancient cahers. Vallancey and Betham affected Petrie and his school to an extent which the latter would have indignantly repudiated. It became a fashion to treat of the Irish forts as though they were as massive as those of Greece or Etruria; and though there are, as we have seen, striking points of resemblance between the fortifications of early Greece and Ireland, this fact was overstated. Styles of masonry, as apparent in Mashonaland and Peru as in Greece, were made the basis of clear-cut theories where clearness is not possible, and the largest and most exceptional blocks were taken as a standard of comparison in size with the

* Journal R.S.A.I., vol. xxxi. (1901), p. 12, illustrated.

average masonry of southern Europe, till readers were impressed with the belief that Dun Aenghus was as "well walled" as Tiryns itself. This exaggeration went further and further, till (carried away by the "cyclopean" masonry and features of some early churches, which no architect outside Ireland would now date before the eighth century) the theoretic pre-Christian origin of our churches and carved high-crosses was evolved and published to the great detriment of our reputation for sober study in archæology.

In fact, we have seen clever modern "cyclopean" masonry built, and have admired the great skill and judgment of the workmen in fitting blocks into others already laid, or adapting them by a few strokes of the hammer; however, none of this "cyclopean" masonry fails to date itself, whereas the modern building with rude blocks is deceptively like the early stonework, and requires caution to detect it.

The forts in Clare occasionally show hammer-work; but all these examples lie along the southern border of the Burren. The "chipping" of the stones of Grianan Aileach, mentioned in the Dindsenchas, is also borne out by the ruin.*

In a few (possibly) later forts the lower face of the wall or terrace is "veneered" with large slabs set on edge; as, for example, at Poulacarran, Cahernaspekee, and the square "moher" near Cashlaun Gar.

The blocks are variously laid, but nearly always with much skill; sometimes the length appears in the face (stretchers); at others, the stronger plan is adopted of laying the blocks across the wall, the ends appearing in the face (headers). The inner facing is usually smaller than the outer.

The batter varies from 1 in 12, to as much as 1 in 5; and the wall has a cornice of larger slabs at Staigue and at Dunbeg, where it still remains. A plinth or projecting base course is found at Ballyallaban and Kilcashel, resembling those in early churches and the round towers. A higher plinth, scarcely a foot wide, rises about 3 or 4 feet from the ground, round the inner face of Cahercuttine fort near Noughaval, and in a stone fort in Morbihan, France. Steps or very small terraces run for a

* Brash, "Ancient Architecture of Ireland," p. 4.

considerable distance along the inner face of the wall at Dunbeg, and on a larger scale, at Caherconree. Curious arrangements of blocks with radiating joints occur in the outer faces of Cahercommaun and Caherscrebeen, near Lemaneagh Castle, Clare: it is doubtful whether these were accidental or ornamental. As for the thickness and height of the walls they are very variant even in the one fort. A few examples from various counties are here given in feet, the height being given last.

Donegal: Grianan Aileach, 12 to 15 by 6; Loughadoon, 14 by 10½. *Sligo*: Cashelore, 10 by 10 Deerpark Cashel, 8 thick; Carrowmore, 10 thick; Innismurray, 7 to 15 by 13. *Cavan*: Moneygashel, 10 by 8. *Mayo*: Doonamoe, 8 by 18; Kilcashel 13 to 12 by 9. *Galway*: Caheradrineen, 7 by 7; Caher Aidne, 6 by 10; Dun Aenghus, 12⅔ by 18; Dun Conor, 18½ by 20; Dun Onaght, 16 by 16; Dun Oghil, 11 by 16; Dubh Cathair, 16 to 18 by 30; Dun Moher, 11 by 15; Cahermugachane, 14 by 11; Cahercugeola, 18 to 13 by 13. *Clare*: Caherdooneerish, 13 by 13½; Caherccloggaun, 9 by 15; Caherbullog, 11 by 7; Cahermacnaughten, 10 by 10; Lismacsheedy, 19 by 9; Feenagh, 13½ by 14½; Ballyallaban, 10 by 9; Caheranardurrish, 8 by 8; Caherconnell, 12 by 14; Cahermacnole, 15 by 8; Cahergrillaun 10 to 15; Ballykinvarga, 14 to 19½ by 15; Caherminane, 8 by 9; Cahercuttine, 11½ to 12½ by 10 Cahercommaun, 20 to 22 by 14; Cashlaun Gar, 10 to 11¾ by 13½; Caherscrebeen, 12 to 17 by 7; Ballyganner, 12 by 8; Roughan, 10 by 7; Glenquin, 10 by 11½; Mullach, 9 by 9; Cahershaughnessy, 12 by 18; Cahercalla, 17 by 8; Creevagh, 8 by 8; Moghane, 13 to 17 (and perhaps 21) thick. *Kerry*: Caherconor, 8½ by 7; Cahercullaun, 9 by 12; Dunbeg, 22 by 8; Caherconree, 14 to 17; Staigue, 13 by 18; Cahergel, 19½ to 12 by 14; Caherdorgan, 9 by 9; Ballynavenooragh, 11 by 8; Cahercrovdearg, 10½ by 12. *Cork*: Cashel Knockanimid, 10 to 11 by 6; Cahermoygliar, 12 by 8.

The thickness of the walls thus varies from 4 to 22 feet, and the height extends to at least 20 feet. The earth works in the motes rise to over 50 feet, but do not admit of very accurate treatment; they were originally palisaded or planted with thorn bushes. We have noted an eleventh-century representation of a palisaded mote on the Bayeux tapestry in the attack of Duke William's soldiers on Dinan.* In about 1788 we find an Irish rath still used for defence. "The garrison, as it was called, was a Danish fort in form circular, and planted with fir trees that made the place so dark as not to be able to see into it. The banks round about it were about 18 feet high, with a stake hedge at top, and a deep fosse around this in an open field on a rising ground." Sir John Carden (writer of the

* Others are shown at Dol, Rennes and (perhaps) Bayeux.

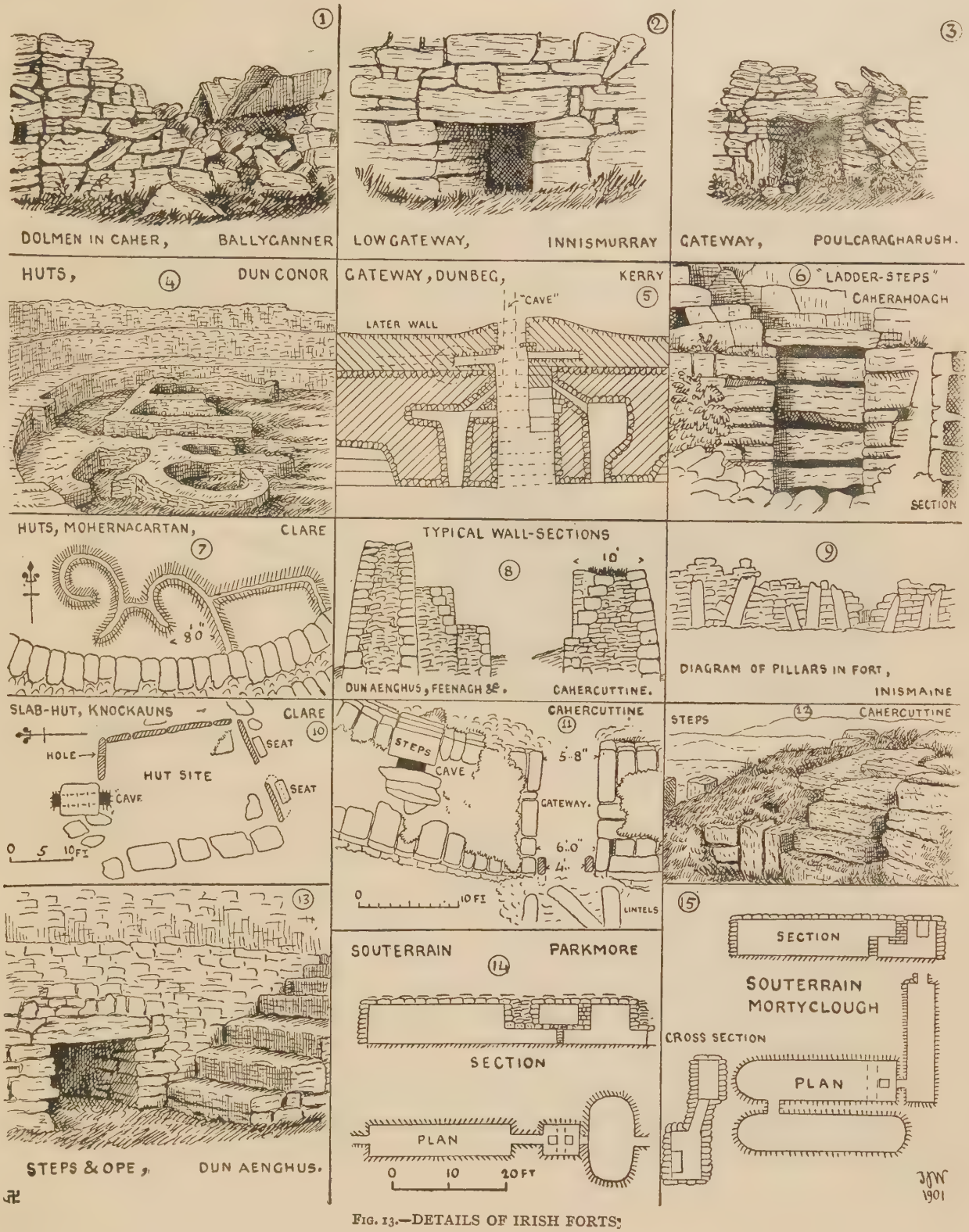

FIG. 13.—DETAILS OF IRISH FORTS.

letter, and the sheriff, we think, of Tipperary) agreed that this fort could not be taken without artillery.*

49. Terraces and Steps.—Some forts have been alleged to have retained as many as four terraces. We have never observed more than three.

Sligo, Mayo, Cavan, and Donegal.—The forts are so much defaced as a rule that nearly every trace of the terraces seem to have disappeared. Only one ancient terrace, $2\frac{1}{2}$ feet wide, remains at Grianan Aileach; it is probable that others existed, though there is, of course, no actual warrant for the extensive modern rebuilding. To the right of the entrance is a wedge-like flight of steps widening upwards and other double flights (V-arrangement) were found under the *debris*. Inismurray Cashel had till 1880 wedge-like (V) arrangement of steps up the wall, but unfortunately the unguided restorers built the recesses into fanciful niches, each containing an inscribed slab. The steps at Moneygashel caher, Cavan, rise in a V arrangement like the last; it has two flights of steps.

FIG. 14.—Steps at Moneygashel, Cavan.

Clare and Galway.—The straight form predominated, the steps being very narrow. In Cahercuttine, near Noughaval, they are from 3 to 5 inches deep; and at Caherahoagh they form an actual ladder hardly projecting beyond each other, but having spaces under each block for foot-holds. Cahermoyle, in Dangan, near Ballyvaughan, has a recess in its terrace,† with only one step like a rung across it. A flight turns

* "Appendix to 31st Report of the Deputy Keeper of the Records," p. 96. I have to thank Mr. James Mills for pointing out this letter to me before it was published.

† The terrace is paved with large slabs.

to the right from the terrace at Cahergrillaun to the top of the wall. Caherahoagh has two sloped flights rising in opposite directions. The best remaining examples of steps in that county are at Caherfeenagh, Caherahoagh ("ladder steps"), Cahercuttine, and Cahergrillaun, but there are remains at Caherminane, Cahercommaun, Ballyallaban, &c. Dun Onacht in Aran, Mullach and Cahercommaun, in Clare, have recesses probably for ladders in the terrace walls; there is a trace of a long sloping ascent at Caherdooneerish.

The Aran forts have been so much restored, and that without proper record of the remains on which that restoration was based, that it is not safe to rely on them in their present condition. There were, however, in 1878, when we first examined them, both straight and sloped flights of steps in Dun Aenghus, and straight flights in Dun Oghil, Dun Conor, and Dun Moher. Dun Oghil then possessed three flights to the S.W., S., and N.E., seven steps in the first, 4 feet wide, and leading up to the terrace, and a continuation to the top; the steps 13 inches high, and 6 inches to 8 inches deep. The south flight had only three stones 16 inches high and 7 inches deep; and the last was entirely defaced, but led to the platform. Dun Moher had four flights of steps, the western 3 feet 8 inches wide, the north-eastern broken, and the eastern with three steps, while the fourth led from the terrace (which was flagged) to the top of the wall. Abundant flights have since been built. In Dun Conor there were, before the restoration, four flights of steps, about five in each, though some must have been covered; another flight led from left to right from the terrace to the top, at the north. Now it and the then utterly defaced inner wall-face of Dubh Cathair have got elaborate terraces and steps. The lower part of a massive flight of sloping steps rising from left to right remains at Cahergel, near Headford, Galway. Like a fort at Mary Gray Hill, Tyrone, they are of unusual construction, for the blocks project from the face of the wall like the steps of a modern stile.

The actual terraces in these forts are very variable in width and height. For example:—Caherdooneerish, 5 feet wide by 5 feet high; Feenagh, lower terrace, 4 feet by 4 feet; second, 2 feet by 4 feet; and upper terrace, perhaps, 4 feet by 4½ feet. Ballykinvarga, lower, 4 feet by 4 feet; second, 2 feet to 4 feet by 4 feet to 5 feet; upper broken. Cahermoyle Dangan, 2½ feet

by 3 feet; Cahercuttine, 9 to 12 inches, and 4 feet to 5 feet high; Cahergrillaun, 1 foot to 1½ feet wide; Glenquin, 2 feet to 4 feet, and 4 feet to 5 feet high; Mullach, lower terrace, 2½ feet by 5 feet; upper, 4 feet by 4 feet; Caherahoagh, 3½ feet by 4 to 5 feet high; Cahermore Killeen, 3 feet by 5 feet high. The terraces of Dun Aenghus, about 3½ feet to 4 feet. Dun Onacht, 3 feet deep, and 6 feet or 7 feet high, with 3 recesses, 4 feet or 5 feet deep, as at Mullach in Clare.

The size of the steps vary, as larger blocks could in some cases be procured and were always preferred. They were, in Caherdooneerish, 2½ feet long; Cahergrillaun, 1½ feet long, 10 inches to 15 inches high, and 12 inches to 16 inches tread; Caherfeenagh, 3 feet long, 10 inches high, 3 inches or 4 inches tread; Cahercuttine, 3¾ feet long, 10 inches high, 3 inches or 4 inches deep; and 2½ feet long, 6 inches to 8 inches high, and 3 inches to 4 inches deep.

Kerry.—The terraces are sometimes replaced by platforms, and the steps run up the wall in X shaped arrangements or bays, as strikingly seen at Staigue fort and Ballycarberry. Staigue has ten bays of X steps; and though the steps are of small shapeless blocks, far inferior to those in Galway

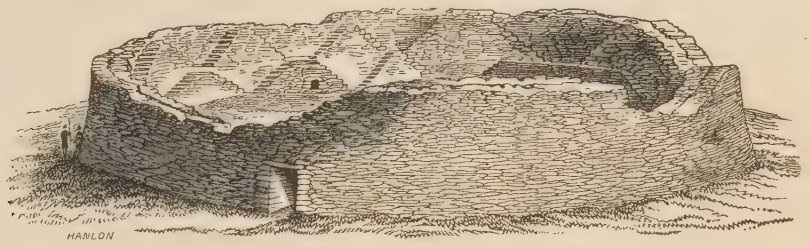

FIG. 15.—Staigue Fort, Kerry.

and Clare, the arrangement is easily discernable. For defensive purposes it was inferior to the terraces and steps, as one could only pass on the level at the top and bottom of the wall. Cahergel has three terraces 2 feet, 2¼ feet, and 2¼ feet wide, the wall being 12¼ feet at top and 19 feet at base, and the whole 14 feet high. It has eight bays of X steps. Cahersavane has continuous terraces and no steps. Dunbeg has three low steps or terraces; and the liss of Caherdorgan to the south of the stone fort of that name and the "Rath Caher" of Ballyheabought, have low earthen terraces faced with dry stone.

For steps other than in the terraces and inner face of the wall we only know of five flights: the rock cut steps ascending the east face of Doon hill fort, above Kilfenora, Clare, the block steps leading up the knoll to

the ruined gate of Ballyshanny fort near the same village, two at Lough-nacrannagh, Antrim, and those at the Giant's Sconce in Londonderry.

50. Gateways.—The regularly-built gateways of early stone forts are some of the most interesting features of primitive building, and are very rare outside Ireland, the best examples being, perhaps, those of Tre Ceiri in Wales and Maen promontory fort in Cornwall;* but the doorways of clochauns and those of the Scottish brochs are closely similar.

In Irish literature we find many allusions showing us how familiar to the ancient inhabitants was the stone gateway of a fort. It is noteworthy, however, that the gateway with side posts, though most frequently named in our books, is rarest in our ruins.† A poem of Flan Mainistrech (*c.* 1050) mentions "a pillar stone in the principal gate of the caher";‡ and in the *Mesca Ulad*,§ warriors are mistaken for "stone columns at the doors of these royal raths," which gets an interesting illustration from our ruins, notably the trilithon gate of the rath near Renvyle, Galway. One of the stone forts named in the Voyage of Maelduin had a stone slab with a hole in it, closing its gateway on the seaside, and had another gateway facing the plain.‖ The outer entrance of the souterrain in the fort of Mortyclough, Clare, was actually closed by a movable slab. Another fort in the same story had a "brazen door and drawbridge," while "The Demon Chariot of Cuchullin"¶ tells us of Dunsciath with doors and ramparts of iron. For the holed slab we probably find equivalents in those lying near the gate of Dunbeg, near Fahan, and at Cahercullane, near Dingle. One has also been found in a promontory fort in Dalmatia. Traces of a drawbridge probably exist in Doon Fort near Kilfenora; we find a gap in the rampart and a square platform projecting from the opposite side of the rock-cut fosse, evidently to support a removable plank or bridge.

Trilithon doorways with side-posts and lintels are found at Renvyle and Caherribert, in Galway, Cahercuttine, Caherminane, Dangan, Ballykinvarga, and Rannagh, in Clare; and some other forts. Upright slabs

* Royal Inst. Cornwall, vol. i. (1864), p. 8.
† "Hunting of Sliabh Trium," p.115.
‡ "Book of Feenagh," p. 131.
§ Todd Lecture Series, R.I.A., p. 21.
‖ *Revue Celtique*, ix. (1888), p. 451, &c.
¶ R.S.A.I., i., ser. iv. (1870), p. 385.

form gateposts at Ballynavenooragh and Fahan in Kerry, or great side-blocks, as in the Cashel of Rathmichael in Dublin and Caheradrine in Galway. The more common type has got sides of coursed masonry, slightly inclined jambs, and large lintels. In some cases double lintels occur, a relieving one lying overhead, as at Staigue in Kerry and Caheranardurrish, Clare. Perfect examples of such doors are found at Inismurray, Sligo; Dun Aenghus (two), Galway; Kilcashel, Mayo; Caheranardurrish, Poulcaragharush, Lisananima and Moheramoylan, Clare; Dunbeg, Kerry; and Cahermoygliar, Cork.* Defaced ones are found in numerous forts. For example, at Grianan Aileach, Dun Oghil, Dun Conor, and many Galway forts; Caherconree, Caherconor, and many other Kerry forts; Cahergrillaun (a most massive example) and many other Clare forts, and several in Mayo, Sligo, Donegal, and Cork. The type is also familiar in Scottish brochs and forts.

Variants of this type have a corbelling towards the upper part to reduce the unsupported span of the lintel, as at the cliff fort of Cashlaun Gar, and in Kilcashel, or slabs projecting like door-jambs from the sides of the passage, as in Ballynavenooragh and the Fahan forts. We also noticed this feature in the shore brochs of Keiss in northern Scotland.

Dunbeg fort near Fahan† has one of the most elaborate and interesting gateways occurring in early forts. It consists of a large passage from 3 feet 6 inches to 4 feet 6 inches wide; and at about 9 feet from the entrance it abruptly widens to 7 feet. The whole is paved and roofed with large slabs. Closer examination shows that the wide passage is original and ran through the older wall for about 16 feet. A later wall, $7\frac{1}{2}$ feet thick, was built outside of, but in contact with, the older, having a contracted entrance and a recess on each side, probably for a beam or sliding barrier. The older part had on each side a small guard-room, each with a "spy hole" running

* To give a few examples of large lintels, we select:—Ballykinvarga, 6 feet by 12 inches by 2 feet 7 inches; Cahercuttine, 8 feet 6 inches by 2 feet by 1 foot 2 inches; Caheranardurrish, 8 feet 2 inches by 1 foot 6 inches by 9 inches; Staigue, 5 feet 10 inches by 9 inches by 2 feet; Dangan (Burren), 8 feet 10 inches by 1 foot 6 inches by 10 inches.

† See excellent plans by Mr. R. A. S. Macalister, Trans. R.I.A., vol. xxxi., plate xx., and Mr. Lynch, R.S.A.I., vol. xxviii. (1898), pp. 325-328.

aslant and looking across the entrance. The right or western room had also a long recess continued into the passage, and at the opposite side of the latter for a sliding beam. The spy-hole of the left or eastern guard-room is closed by the later pier. It has been carefully planned by Mr. P. J. Lynch, by myself, and by Mr. R. Macalister, the plan by Du Noyer being undoubtedly most inaccurate. An underground passage remains beneath the entrance, and raised way through the outworks. It was probably intended to enable the garrison to sally and assail an attacking band in the rear.

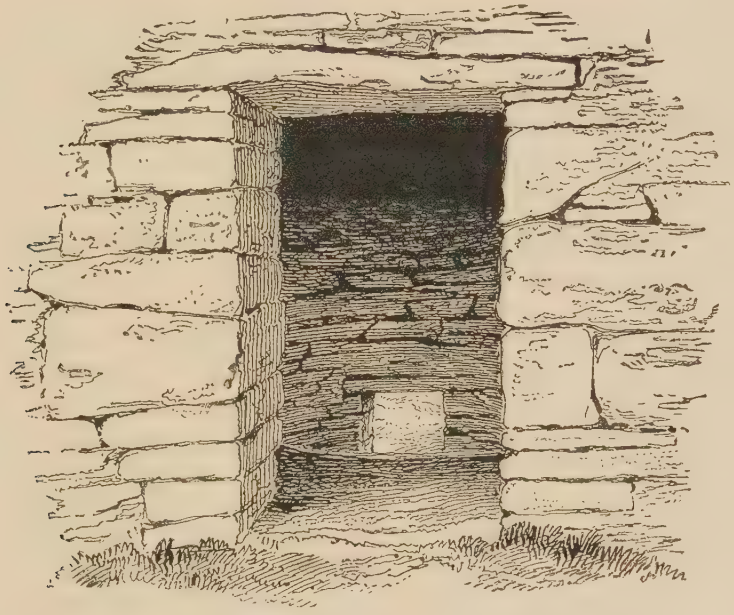

FIG. 16.—Low Gateway, Innismurray, looking through inner door.

The gateway of Ballykinvarga Caher is approached by a sunken passage through the abattis, this passage, as at Tiryns and elsewhere, turning to the right (and possibly intended to expose the right and unshielded side) of anyone approaching the wall.*

The low doors of Innismurray cashel are also exceptional in forts, but are similar to entrances not uncommon in souterrains; the outer ope

* Can this approach with the right side to the object have only had a luck-bringing intention? and did friendly visitors make a "desiul" round the fort before entering?

is much lower than the inner, an abrupt rise in the floor taking place in a domed chamber where an enemy would lie at a deadly disadvantage against any defender of the passage.

The doors, as a rule, face the south or east, though, where the fort is built among rocks, the position of the gateway depends on the ground, being turned to some accessible ledge or track; but the gateway at Cashlaun Gar is built upon the only precipitous ridge less than 10 feet high and was evidently reached by a ladder. At all other points were either a high cliff or accessible slopes, and both were avoided by the door-builders.

Some forts present a perfect face without any trace of a gateway; they may have been also intended to be entered by a ladder, but care has to be used in asserting the fact, for unless the whole outer face can be examined, a doorway may have existed; for example, at Roughan fort, we long believed we had established the want of a gateway, but found that remains existed under bushes on the inner side, and that its narrow ope less than a yard wide was hidden on the outer face by bushes and *débris*.

To enumerate the size of a few gateways (giving the compass point, and, if possible, the height) we may select:—*In Donegal*—Grianan Aileach (S.), 3 feet 8 inches to 3 feet 10 inches; Cashelore, 2 feet by 2 feet 6 inches high. *In Londonderry*—Giants' Sconce, 5 feet. *In Sligo*—Innismurray, main gate (W.), 3 feet 5 inches to 3 feet by 6 feet 3 inches high. *In Galway*—Dun Aenghus (E.), 3 feet 5 inches, and 6 feet 6 inches high; Dun Onacht (E.), 5 feet 9 inches; Dun Conor (N.E.), 6 feet 3 inches; Ballynasean, 2 feet 6 inches; Caherribert (W.), 3 feet 2 inches to 2 feet 10 inches by 4 feet 10 inches. *In Cavan*—Moneygashel, 3 feet 8 inches. *In Mayo*—Dunnamoe (E), 3 feet 8 inches. Kilcashel 4 feet 9 inches wide and about 6 feet high. *In Clare*—Cahermoyle-Dangan, 2 feet 6 inches; Caherdoonerish (E.), 2 feet 8 inches; Ballyganner South, 2 feet 9 inches, passage, 6 feet 9 inches (E.); Ballyelly (W.), 2 feet 10 inches; Cahercommaun (N.), Poulacarran (N.E.), Cahermore Roughan (E.), all 3 feet; Cahercuttine (S.S.E.), Ballyganner North (E.), all 4 feet 2 inches; Caheranardurrish (E.), 6 feet high, Rannagh (S.S.E.), Poulcaragharush (E.), Moheramoylan (S.), and Caherahoagh (S.E.), all 4 feet 4 inches; Cashlaun Gar (E.N.E.), 5 feet 2 inches; Ballykinvarga (S.S.E.), 5 feet 9 inches; Cahermacrole (E.S.E.), and Cahergrillaun (S.S.E.), 8 feet and 8½ feet, but perhaps only in the passage, and not at the gateway. *In Kerry*—Dunbeg (N.), 3 feet 6 inches; Caherconor, "Fort of the Wolves" (E.), 4 feet 4 inches; Caherdonnell (Cahernamairtinigh) (E.), 3 feet 9 inches; Staigue, inner 3 feet 6 inches, outer 5 feet 2 inches; Ballynavenooragh, 4 feet 6 inches; Caherconree (E.), 7 feet 6 inches, perhaps only in passage; Cahermurphy (N.W.), 2 feet 3 inches to 3 feet. *In Cork*—Cahermoygliar, 2 feet 8 inches.

It may be seen that among these examples the width varies from 2 feet 6 inches to 5 feet 2 inches, and the height from 2 feet 6 inches to 6 feet 6 inches.

51. **Abattis and Pillars.**—In ancient Ireland pillars were set near forts, frequently close to the entrance. Several of these occur at the forts of Cork and Kerry; we only recall, in Clare, a small example in the fosse of a rath, on the hill overlooking the great stone fort of Cahershaughnessy. In mediæval Irish literature, the Táin Bó Cuailgne mentions "a pillar-stone on the green before a dun"; the "Mesca Ulad" speaks of a "pillar-stone outside the fort which all the Clanna Degad could not lift," and of stone columns raised to shelter horses and houses from the snow near Knockaney fort in Limerick*; but we are not aware of the existence of any certain allusion to an abattis or *chevaux de frise*. This is not surprising when we consider that these obstacles are only found in wild and remote corners of Ireland, the only ones of any importance being in North-western Clare and the neighbouring Isle of Aran. We find at Dun Aenghus, between the second and outer ramparts, a band of fixed pillar-stones 60 to 80 feet wide; the pillars as a rule 3 and 4 feet high, and set closely together. A still more interesting example girds the great caher of Ballykinvarga in Clare; it varies from 50 to 100 feet wide, of close set, low pillars, jagged, and sharp, and smaller spikes set between them; a most painful and dangerous tract to traverse in

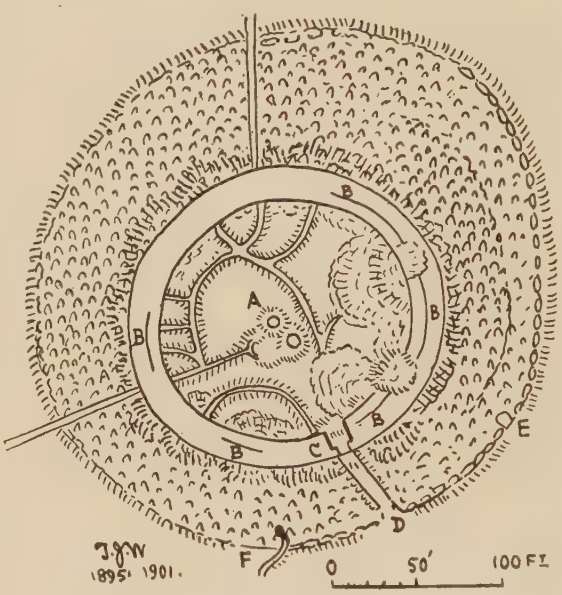

FIG. 17.—Abattis, Ballykinvarga, Clare.

* "Táin," as quoted in "Feis tighe Chonain," p. 79. "Mesca Ulad," pp. 17–21.

peace, and probably too dangerous for attack in war. The outer edge is kerbed with large blocks and an earth mound; the greater width to the N.W. is accounted for by a decided alteration in the setting at about 40 or 50 feet from the fort whence the spikes are more apart, and were probably an afterthought or a still later addition. The largest block in the outer kerbing is 7 feet by 2 feet 7 inches by 1 foot thick,* and, with its smaller but massive neighbours, forms, to modern minds, a most dangerous shelter for an attacking force, once they had rushed over the open field. The abattis at Dubh Cathair in Aran is a slight structure compared to the two first examples, and still less (scarcely worthy of the name) is that at Dunnamoe, Mayo, a band of small blocks scarcely rising a foot above the soil. The late Dr. Frazer had, in his collection, a plan of a cliff fort in the mountains north of Anascaul to the west of Dingle, in Kerry, the ground before which was strewn with large, loose blocks.

The feature is not confined to the forts of Ireland; we find it at Pen Caer Helen in Wales, the pillars standing in rather open ranks with sharp slate splinters set between the larger stones; and others exist at Cademuir and Dreva in Scotland.† Castel Coz, at Finistére, in Brittany, has a double line of pillars as an obstacle between the walls, and running across the headland.‡ A "Ring-berg" at Laufen, in Berne, Switzerland, has a semi-circle of stones on its defended side; and the outer ring of the great "Bauerberge" on Möhne, in the Baltic, has an earth-mound set with large stones closely resembling Ballykinvarga. Perhaps, akin to such defences is the line of pillar-stones across a projecting headland in Kerry, the cliff near it bearing the suggestive name of Doonroe.

Pillars exist in groups near certain forts in Cork and Kerry: in the former we find a "gallan," or pillar, and a defaced dolmen at Ballynabortagh fort (O. S. Map 52), and others at forts near Cahertruce and Cappaboy; but the subject of Cork forts has been, as usual, unworked, and we have been able to do very little in the district which (save for

* Journal, R.S.A.I., vol. xxvii. (1897), p. 125, illustration.

† Archæological Journal, vol. xxv., p. 228. Archæologia Cambrensis, ser. iv., vol. xii., p. 345. Dr. Christison's "Early Fortifications of Scotland," pp. 225, 226. See fig. 4, *supra*.

‡ "Archæologia Cambrensis," ser. iv., vol. i. (1870), p. 286; and fig. 4, *supra*.

the endless labours of John Windele, so forgotten and neglected by present antiquaries) has been almost unnoticed by Irish workers. Not far from Annagh Church, Kerry, are a caher and eight pillars, 10 feet apart; six of these have fallen. Various theories have been put forward, the least satisfactory of which the "monumental" theory* supposes the abattis of Dun Aenghus to be a cemetery. No one who had seen the serried ranks of pillars at it or Ballykinvarga could have ever for an instant conceived of such an explanation for such defences, but in the case of the above "detached" gallans it may hold good. For other purposes of such "detached" pillars, we may perhaps find a clue in a poem of Seanchan (*c.* A.D. 640) in the Book of Lecan,† which mentions "a stone of meeting by the three mounds of walled fortresses"; and in the chartulary of Aberdeen, where Alexander Steuart, Lord of Badenoch, is recorded to have held a court of regality‡ "apud le standand stanes de la Rath de Kingusie." The latter earthen fort is still extant, but the pillars have been removed, doubtless for building material. The Lebor na hUidhre mentions "pillar-stones erected to commemorate victories"; but without records we cannot tell whether any of these gallans are dumb witnesses of forgotten bloodshed. We have noted the pillars in a stone fort at Edentinny, and there are others in forts in Cork, Armagh, Donegal, Tipperary, and one in a small ring at Rathcroghan.

52. **Traverses.**—The absence of walls to embarrass any assailant who gained the interior of the fort has been noticed in Scotland and other countries. Many of the Irish cahers, however, have an elaborate and confusing system of radiating walls, small enclosures, and other impediments; some of these may be of modern date ("folds," &c.), but many command or obstruct the entrance in a way suggestive of defence. The gateway of Caherconor (the so-called "Fort of the Wolves") in Kerry opened into a small court, whence a narrow passage ran between two huts into a maze of other passages and open spaces. In Cahermurphy, not far away, a successful capture of the gateway would have left the

* "Pagan Ireland," p. 186. Col. Wood-Martin doubts this theory.

† "Book of Lecan," p. 17. ‡ Dr. Christison, "Early Fortifications of Scotland," p. 13.

enemy hampered in another deathtrap. Cahercommaun, in Clare,* has a most curious arrangement of radiating walls and a long passage. Caherconnell, Ballyallaban, and Caherscrebeen have cross walls. Ballykinvarga, Clare (like Castle Chûn in Cornwall), has a close row of small enclosures projecting from the wall and one loop beside the gate. Dun Oghil, in Aran, seems to have had ancient radiating walls, and such occur at Cahershaughnessy and Cahercalla, near Quin; Cashel, in Cork; Moghane and the Grianan Aileach; while the earthen fort near Shannid, Limerick, has cross mounds popularly said to have been made for cannon.

53. **Streets and Greens.**—Cormac's Glossary† mentions a ramhat, "an open space or street, before the forts of Kings every neighbour whose land comes up to it is bound to clear it." The green was a sufficiently important feature in tribal life to be regulated by the ancient laws; so we find the Book of Aicill‡ alluding to rules for hurling on the green of a chief cathair, and for preventing the erection of structures on it, save when connected with the games. In some cases the green was elaborately fenced, if we may trust the "Mesca Ulad,"§ which names "chains firmly fastened to the seven pillars that are on the green outside" the fort. We do not know any example of an enclosed or marked green, but at Caheraneden, near Ballyganner, Clare, a broad roadway leads southward from the fort for about 500 feet, as far as a fallen dolmen. It was evidently formed by removing the uneven upper surface of the rock, leaving the lower and less weathered layer to form a pavement. The traces of another ancient road at Usnach is well marked; another roadway connected with the legend of the Black Pig remains in Kildare, running from a fort to a mote, and straight for Dun Ailinn, and an ancient paved road adjoins Knockra Caher in Donegal. It has been suggested, but perhaps doubtfully, that the lower enclosures of motes may represent such "greens."

* See plan, section 96.

† Quoted in the Introduction to the "Book of Rights." It is noteworthy that "Raw" in Scotch and English names is 'straight street' or 'row.'

‡ "Book of Aicill," (Senchus Mor, vol. iii.), p. 253.

§ "Mesca Ulad," p. 43.

54. **Outworks.**—We may class outworks as bastions, annexes, bauns, fosses, earthworks and sunken ways. The loop of wall, forming a side enclosure to so many of our forts, and rising to no little size and importance, at Dun Conor, in Aran, is nearly always less thick and lofty than the main fort. Ithas equivalent enclosures in earthen forts and probably was used as a baun, and marks an advance in comfort and cleanliness. The presence of thin-walled, circular, or straight-sided enclosures, without steps, terraces or hut-sites, near several cahers in Clare and Kerry (*e.g.* Cahernaspekee, Cashlaun Gar and Cahercullaun) are also very probably for cattle, as wolves and marauders must have abounded in those wild places and times. We must, it is true, regard DuNoyer's "Fort of the Wolves"—Cahernamactirech—as a misreading of "Cahernamartinech" the name of a neighbouring fort; but there *was* a "Cahernam°tire" in Clare in Elizabethan times, which is probably the fort still named Cahermacateer; and the many places (with forts) called Breffy tell of the presence of "the grey beast" near human settlements. Near the massive stone fort of Cahermacrea, Clare, we find a thin-walled oval ring-wall enclosing a space three times the diameter of the caher; it was very probably a baun, and is called Cahermacrea on the maps. Smaller forts are sometimes embedded in the ramparts of larger ring-walls in Scotland, Wales, and Ireland, Moghane being the most noteworthy Irish example. They could scarcely have preceded the great walls, as these are far more defaced and of different and ruder blocks. We might regard them as precursors of the bastions and towers in later fortresses; but it is equally possible that they were built upon and out of the main walls, because the latter had fallen, and were too extensive for the wants of the later indwellers. We see forts, one on a rock, included in the lines of the huge "Dane's Cast" in Down, and of the "Worm-ditch" in Cavan, but not (so far as I know) in the extensive lines of Duncladh in Longford, which has forts lying near it, but never seems to have joined them or had any such constructions in its own earthworks.

Sometimes a stone fort had a trench round it, like Staigue, or a rock-cut fosse, like the forts of Doon (Clare), Tara, and the great Mote of Slane (Meath). The Doon fosse is a beautiful work curved and sloped most regularly, with a square projection for a drawbridge or foot-plank and rock-cut steps. There is a rock-cutting faced with a dry-stone wall

before the gate of Ballyallaban caher, Clare. Sunken ways are found leading from some motes to rivers; they are found in several British forts, *e.g.* Linhope in Yorkshire and also at the great motes of Dromore, Down, and Dundermot, Antrim, Dunbought rock fort near the last, and Mullacreevagh, Westmeath. The covered way at Mycenæ will be remembered as leading to a well outside the fortress. The walled sunken way through the abattis of Ballykinvarga, and the long souterrain under the raised entrance mound of Dunbeg (at any rate, in the latter case) more properly belong to defences unconnected with the water-supply. The trenches, concentric or otherwise, girding so many of our forts, will be noted in the section treating of the typical examples.

55. **Souterrains and Cells in Ramparts.**—The subject of souterrains, "caves," "ooans," &c., is of sufficient independent importance to form the subject of a separate essay, but a brief notice of those forming essential features in forts is necessary for the greater completeness of our studies. Caesar, in his Commentaries, notes the skill of the Gauls in making subterranean retreats. Souterrains appear in Irish works, and one Irish "earth-house" is recorded in the Landnamabok. Leif, the first Norwegian settler in Ireland, found a great underground house (Iârdhûs), nearly dark, and inhabited by an Irishman whom he slew, and took his goods and sword, being ever after called Hiorleif, or "Leif of the Sword."* The Dindsenchas,† in its legend of Tipra Sengarman, tells how Finn (after the avengers of his victim Cuirech had wrecked Croch, Dun, Cathair Comfossad, and Caisil Gannain) found that the raiders were hidden in an underground cave at Carn daim derg, and dug them out; only one escaped, "for there is no destruction without at least one fugitive." The spirit of Chuchullin, in the legend of the "Demon Chariot," tells King Laoghaire of his plundering raid to the horrible fort of Dunsciath, which had iron ramparts, doors, and souterrain. In "Cormac's Glossary,"‡ Nede pursues Caier with dogs into a fort, and finds him hidden under the flagstone behind it.§

* "Landnamabok," Part i., chap. v.

† *Revue Celtique*, 1894, p. 447.

‡ "Cormac's Glossary," p. xxxix.

§ The previous papers on fort souterrains are given in the excellent list in Col. Wood-Martin's "Pagan Ireland," pp. 204–212 and p. 647.

The simplest form of souterrain is walled with dry masonry, and covered with long slabs or pillars. Several of these "caves" have yielded ogham inscriptions, on roof-stones which had been taken from some old burial-place, as at Drumloghan in Waterford, Dunloe, near Killarney, the "cave" at Rathcroghan in Roscommon, and one at Carncomb, near Connor in Antrim. The last had a side passage, and varied from 5 feet 3 inches to 2 feet 9 inches wide, tapering upwards. The souterrains in

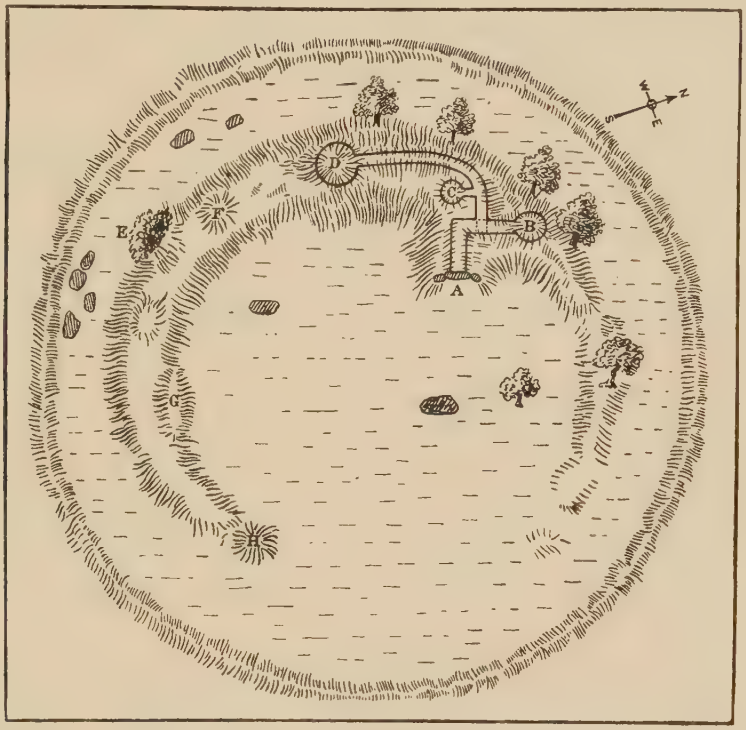

Fig. 18.—Souterrain in Gurteen Fort, Westmeath,

cahers in the Burren are usually a natural cleft or a quarried passage in he rock, the sides built with small stones, and a roof of slabs, hut no pillars. These passages are straight, "C" curved or "S" curved, or "L" shaped in plan, and are seldom more than 3 feet wide, though some are 6 feet high; they sometimes lead outside the fort passing under the wall. One in Cahermacnole, near Carran, is of considerable length, close on

100 feet, but with that exception the longest measured in that district seldom exceeded 20 feet. The curved souterrain in the western caher at Ballyganner South is 6 feet 8 inches wide and 5 feet high; the roof slabs rest on cornices projecting 12 inches on either side.

A more elaborate form has got boat-shaped or bee-hive cells with corbelled roofs; these seem widespread from Meath to Kerry. A beautiful example has been described by Rev. W. Falkiner in the *Proceedings* of the Royal Irish Academy.* It is in the inner earthwork of a rath at Gurteen (Westmeath), and has three domed chambers; the most noteworthy feature is a shelf across the under passage giving access to the main gallery.

A very fine souterrain over 50 feet long lies under the graveyard to the S.E. of Killala Cathedral (Mayo). In digging a grave, the roof of a bee-hive cell was broken in, and by this means only access is given to the structure. From the circular cell which is 6 feet in diameter, narrow passages about 2 feet wide run east and west, and from the eastern side wing, which is 25 feet long, but is partly stopped, a similar passage leads southward; while a larger opening to the north gives entrance to three oblong chambers, two 6 feet wide by 18 feet and 8 feet 6 inches long, and 4 feet high; and a third 5 by 15 feet, which has an opening to a chamber of equal size to the east. The shape of the ground, and a considerable bank show that this was the souterrain of a large rath in which the church was founded.† The church of Glencolumbkill (Donegal) has near it a souterrain, and is in the ambit of another rath.

Meath abounds in such structures; they are frequently disclosed, like that of Killala, by a collapse of a domed cell; we need only cite a good example with two cells near Clady Church, and others at Blackcastle and Slane, but in many instances there is no evidence to connect them with forts. The most remarkable feature in any souterrain connected with a fort in Meath is at Crossdrum, near Oldcastle, where Mr. E. C. Rotheram discovered two "ventilating" shafts, one in the innermost cell. This

* Vol. v., ser. iii., p. 211. We utilise the accompanying plan.

† Explored by Mr. R. Cochrane, Journ. R.S.A.I., 1898, p. 292.

"cave" had also an excellent example of an "obstacle" entrance from the outer passage through the floor of the inner one.*

Perhaps some of the most curious in western Ireland are those near Mortyclough (Clare), at the S.E. corner of Galway Bay. One lies in Parkmore rath, a double ringed, circular fort, 120 feet internally, and 214 feet over the fosses, the ramparts being stone-faced. The souterrain is about 6 feet square; it opens in the middle of the fort, and runs S.W. for 20 feet 6 inches, being built with fair-sized stones, and roofed with slabs. The passage ends in a wall; but an opening in the roof gives access to a chamber 7 feet by 6 feet by 4 feet, and a second trap-door leads down to another chamber at right angles to the first, 14 feet by 10 feet by 6 feet, whence, from the end farthest from the entrance, another small passage leads out through the rampart; its opening was closed by a slab 4 feet square.

A somewhat similar "cave" remains in Mortyclogh fort; and lesser but equally complex passages are found in the angle of Clare near Kilkee and Carrigaholt. One passage in the stone fort of Cahermaclancy, near Lisdoonvarna, ended in a very deep pit leading down to water at an unknown depth, and another in the neighbouring fort of Caherglasha had side cells. The Kerry "caves" are numerous, and of great interest. Those under the gateway of Dunbeg, and in the caher of Ballynavenooragh, are noted elsewhere, and we need only allude to those connected, not only with forts, but even with detached huts, at Fahan. Many are only straight, without side cells; but we meet examples, "dumbbell shaped" in plan, and one "wine-glass shaped" in plan lies in Cahernuadh.† Cooslughoga "cave," Mayo, has cup-marks on its pillars.‡

Closely cognate with the souterrain, and also with the passages in the Scottish brochs, are the passages and cells in the thickness of the walls of certain cahers. We have noted the strange recesses in the great rampart of Dunbeg. The entrance to a cell (but no chamber) is found in the inner

* Journal R.S.A.I., vol. xxvii., p. 426. For other information by the same author, see "Caves in the Slieve na Callighe district," Proc. R.I.A., ser. iii., vol. iii.; and "Ballinvally Stone Fort," Journal R.S.A.I., vol. xxix., p. 259. Ventilating shafts also occur at Ardfinnan Rath.

† See Mr. R. Macalister's plans in Trans. R.I.A., vol. xxxi., plates xxi. and xxii.

‡ Sir W. Wilde's "Lough Corrib," p. 206.

wall of Dun Aenghus, and tradition told of others, not now discoverable, in Dun Conor and Dubh Cathair. A passage "high enough for a man to stand up in," but now inaccessible, occurs inside the rampart of the caher of Kilcashel (Mayo) for about 26 feet. A small oblong chamber remains in the monastic cashel round the cells and oratory on Illaunatannig, but the most striking examples are in the forts of Grianan Aileach and Caherconor ("the Fort of the Wolves") at Fahan. From the plans of these forts, as given by DuNoyer, it would appear that (as is supposed to have been the case in some of the Dartmoor "pounds," where walls with hollow centres remain) these passages ran through the greater part (if not all) of the wall. The detached passage, in the southern segment of Caherconor, was probably continuous with the N.W. segment, and it should seem that the builders of the large hut (marked "h" by DuNoyer, and "b" by Mr. Macalister*) broke into and closed the passage; the northern section has now nearly disappeared, and the other reaches are inaccessible. But as Mr. Macalister's researches do not bear this out, we write with every reserve.

The recesses in the entrance of Grianan Aileach (if not for doors) may be built-up portions of the passages remaining in the walls to either side of the gate. A passage remains in the eastern segment of Cahernamairtineach (DuNoyer's caher, No. 8, Windele's Caherdonnell), which, strange to say, is (like the fort-name) overlooked in DuNoyer's plan, though Windele† mentions its existence, and it is now sufficiently visible. DuNoyer's plan of this caher, and indeed all the plans in his paper on Fahan are very far from accurate.

Cells in the wall occur in several Kerry forts beside Dunbeg. Staigue has two, neatly domed and with low doors; defaced cells occur in the wall of Ballynavenooragh, as given in a plan in Dr. Frazer's collection;‡ there is also a fine souterrain 15 or 20 feet long, 10 feet high, and 5 feet wide, with a lateral chamber in the middle of the fort, and within a hut-site. A cell is shown in the wall of a nameless cliff-fort in a plan in the same collection. So far as we can identify it, it is on Dromaville Mountain,

* Archæological Journal, xv., 1858, pp. 9–10. Trans. R.I.A., vol. xxxi., Plate xxi.

† Mss. R.I.A., Windele's Sketches, vol. 2, p. 238, Supplement.

‡ See figure 21.

2 or 3 miles north of Annascaul (Kerry), at Carrig-na-Spania, and is three-quarters of a mile from the ruin or house locally attributed to Cuchullin. That hero is said to have carried off a Spanish lady who, endeavouring to escape down the cliff, fell and was killed, giving her name to the rocks on the summit of which the caher is placed. A cell (not noticed by Mr. Wakeman) is traceable in the wall of Dunnamoe, Mayo.

56. **Wardens' Huts.**—Wardens' huts present a difficult subject; although a "seat" before the fort is mentioned, and in some cases watch was kept therefrom, there is little, if anything, in the ruins which even externally resembles a guard-house. The most authentic case is Dunbeg (Kerry), where we have two cells with "squints" and straight opes commanding the entrance passage. If the galleries in the wall at Grianan Aileach, Caherconor (Fahan), and Cahernamairtineach, ever opened into the door-passage, we might put them into the category. Huts frequently remain inside the forts near the gateway; but then others existed in other places in the garth. At the time of the first Ordnance Survey there were two huts (one to each side of the gateway) outside the wall of Dunnamoe (Mayo); but these are not shown in Mr. Wakeman's plan. DuNoyer shows a small cell in the wall as opening outwards beside the gate of Caherconor ("the Fort of the Wolves"); but we could not find it in the ruin or any other examples except of the most doubtful nature in some hundreds of cahers which we have been able to examine in the west of Munster and Connaught.

57. **Holed Stones, Bullauns, Oghams, and Carvings.**—Holed stones were found at Cahercullaun and Dunbeg, and bullauns near a nameless caher in Tullycommaun, Clare. Natural basins, closely resembling the worked bullauns, appear near other forts in Clare and Galway; but, as similar examples are found in the crags far from any fort, and numbers of artificial basins are found near dolmens and in old "killeens," we may regard their appearance near forts as accidental.

Stones, with Ogham inscriptions, have been found in forts, for example, the Dunbell raths and the remarkable pillar in Dunmore, near Slea Head (Kerry); their consideration lies outside the present essay. As for non-religious (Christian) carvings, Mr. Macalister has figured some curious

ones of uncertain age, but probably post-Christian, from the Fahan group; those at Clochan-bothair-an-trasnuig display crosses, stars, and nondescript scorings and figures. One at Cathairmurphy (Caher of Glenfahan) has Maltese and other crosses, spirals, and waved lines, forming a rude guilloche, and ruder interlacings, a conventional human figure, and a cryptic Ogham stem, "LMCBTM", perhaps a mere charm. Another, from Cahernamairtineach, has "O+YΓ⊕." We have found among the Clare forts a scribing at Cahercommaun resembling "yoc§+"; and one, a line with five cross-strokes, in the caher near Newmarket House, Clare. A few rude circles and crosses occur on stones in forts at Ballyganner and Caherfenagh. The Cahercommaun stone seems to be worked by some idler, who scraped the mark of a weathered-out fossil brachiopod into an "o," and by some other cuttings joined and made shapely the natural weather-cracks. Indeed we may question whether any purpose, deeper or more intellectual than the idler's natural love for scribbling and whittling, underlies these mysterious markings. It is much more wonderful that a people with so exquisite a taste for ornament in metal, &c., and who, even in a remoter past, could cover the graves of their chieftains with elaborate ornaments and hide their work in darkness and "long night," could not (or would not) spend some of their abundant leisure by carving, were it ever so rudely, the door-posts, lintels and pillar-stones of their ancient fortresses.

58. **Remains of Dwellings.**—The timber structures in our forts have of course perished without leaving a trace, and we can only replace them doubtfully from our literature, which is often very rhetorical and exaggerated in such matters. Of those buildings, in which stone was only partly used, we cannot speak with very much confidence; but of the stone huts numbers remain in such excellent preservation that the difficulty lies rather in selecting and condensing than in procuring the material.

Connaught.—The huts in the Sligo forts have left little trace;* those in the Cashel of Innismurray are very probably entirely monastic. At Dunnamoe (we learn) that the circular clochauns before the door have

* The building within Grianan Aileach was mortar-built, and is said to have been a late chapel.

vanished; but three huts remain against the inner face of the main rampart. They are built against the wall near the entrance, and form semicircles; they are beehive huts, averaging 9 feet across, and 4 feet 6 inches the height from the ground to the spring of the roof; the doorway of the more eastern remains, facing the north.* The huts, if any, have entirely vanished from Dun Aenghus, and were reduced to almost untraceable rings of foundation in Dubh Cathair. In Dun Conor a very interesting group remains at the southern end of the garth which strongly suggests a group in Tre Ceiri. It has been largely rebuilt; but, so far as we can judge, it preserves the plan of the foundations as we saw them in 1878, long before the wholesale rebuilding was inaugurated.

Clare.—The Clare forts are not rich in huts, and those that remain, from the small amount of *débris* and other indications, were probably roofed with timber and "scraws" of sod, like the "booley huts," put up by herdsmen in summer in the Connemara district, which consist of low, dry-stone walls, and are covered with a "tent" of "scraws." A hut-site, D-shaped in plan, and 18 feet internally, remains in the garth of Lismacsheedy cliff fort, near Ballyvaughan. A group of five conjoined cells abut against the rampart of Mohernacartan, on Slievenaglasha. There is a souterrain in the same fort. The four neighbouring forts of Cahercommaun, Cashlaun-gar, Knockaun, and Mohernaglasha, all exhibit huts, but of somewhat doubtful age. Cahercommaun had five small huts inside its outer wall; three were oblong; two of these adjoin radius walls, and two were semi-circles, a third semicircular hut is against the outer face of the second wall, and a round hut is embedded in the line of the central radius wall, just within the foundation of the second ring. The only hut of any size, 27 feet by 18 feet, lies about 50 feet outside the fort. The ruins of four round huts, two conjoined, remain in Cashlaun Gar, also one beehive hut, the dome of which has collapsed; another remains in Mohernaglasha; its low, lintelled door was on the point of falling five years ago. The structure does not appear to be very ancient. In Knockaun Fort is a much more curious structure. The fort itself is a thin-walled, rude rectangle, and

* Mr. W. F. Wakeman, in Journal R.S.A.I., 1889, p. 182.

within it lies a straight-sided enclosure of slabs set on end. There was a doorway in the middle of the southern line, and it had a flat block on either side, most probably for a seat.* On the north side a passage ran under the blocks to a short souterrain covered by one large slab, 7 feet square; the enclosure is about 20 feet each way, and is not square. In the Glensleade group, we only recall one well-marked hut-site, a semicircle, inside the wall and adjoining the gateway of Cahernamweela. Ballyallaban Caher has the foundation of a circular hut and an oblong building, 36 feet by 15 feet, with sloped walls. In the Ballyganner forts there are no apparent foundations of circular huts; but one enclosure of thin walls faced with slabs surrounds a small oblong foundation of slabs set on end —a more perfect example, illustrated in the Journal of the Royal Society of Antiquaries of Ireland,† lies a short distance outside the wall of Caheraneden, and rings of slabs set on end remain in Ballyganner South, near the forts on the hill; near the walled cromlech in Ballyganner North, and near Cahercuttine, in the latter townland, where one encloses the entrance of a small souterrain.

Three small round huts lay in the middle of the garth of Ballykinvarga caher, and a large oval hut in the neighbouring Caherlahertagh; and except three of those very small huts (usually considered to be kennels) in the upper Caherbullog, one in the Ballyelly group, and traces of three in Cahershaughnessy, the remains in the other forts are doubtful, while all have suffered the extreme of overthrow and nearly the extreme of demolition.

Kerry.—Kerry, undoubtedly, holds the key to the study of Irish Clochauns in forts; they exist in hundreds, and many are quite perfect. We will only note a few of the more typical, none the less that, in a previous part of *Transactions* R.I.A., Mr. R. A. S. Macalister has most fully examined and given many plans of the magnificent group at and near Fahan. We have as yet noted only two huts consisting of a group of cells, namely, those at Dun Conor and Mohernacartan; groups of cells, now become common enough, and are as a rule well preserved.

* See figure 13. A seat also occurs in a recess of the passage in Grianan Aileach.

† Journal, vol. xxvi., p. 120.

We find in Ballyheabought caher not only a semicircular hut against the wall but a round clochaun divided into two by a later wall and opening into a "bedchamber or small semicircular annexed hut," a passage of flags set on end leads from the door round the northern side of the main clochaun into an oblong hut, now much demolished. The clochaun in Caher Gel is 8 feet high, the wall 5 feet thick. In Cahirdorgan, near the deeply interesting church of Kilmalkedar, is a group of beehive huts; the north-western is about 15 feet diameter, and 9 feet high; the south door oblong and lintelled; the north-eastern is the same size, the door facing the east; south of it is a large cell; its top, as usual in the Smerwick forts, has collapsed; it measures 12 feet in diameter, and is about 10 feet high; the door facing the S.W. is lintelled, and measures 2 feet 4 inches by 4 feet. Attached to the south side of the last is a small hut, which is 11 feet 9 inches long and 5 feet wide; the ridge is of 7 flags, and the door faces N. W., 2 feet 10 inches high, and 1 foot 4 inches wide, the wall being 2 feet thick. Near the gate, if indeed the gap be a gate, is a very small oval hut or kennel. A souterrain is said to reach from this fort to the village; the fort has a wall from 9 feet to 13 feet thick, and the garth is nearly 90 feet across.

Six huts adjoin the inner face of the wall at Carrig-na-Spania fort, and three lie outside. A fort at Ballynavenooragh, near Dingle, is noteworthy for its souterrain, and also has two conjoined cells, the eastern 21 feet in diameter, the walls from 3 feet 9 inches to 4 feet 6 inches thick; it has doors to the east and west, the former 3 feet wide, and has a paved and kerbed path to the eastern gateway which is 4 feet wide with sideposts of slabs set in the centre of the wall, as at Fahan and the Keiss brochs. The western door 4 feet 9 inches wide opens into a second cell 9 feet wide, and over the souterrain; it has a second door to the north 2 feet 6 inches wide. There are some of those small slabs set on end in the floors of huts such as are found at Fahan and Holyhead in Anglesea; the ope or trap-door leading to the souterrain is 3 feet wide; as already noted, there are defaced chambers or passages in the wall which is 11 feet thick and had steps and three terraces.

To deal with the Fahan huts (such as lie in cahers) would be going over

well-worked ground; Cahernamairtineach has a "warden's hut" in the gateway; it looks into the passage in the wall; north of this are two oval foundations and the remains of two curious cells conjoined, and almost B-shaped in plan; farther westward is a fairly perfect hut forming one of a conjoined group of three; the southern portion of the middle room was screened off by a curved wall; the third, a southern hut, is rudely rectangular, with rounded corners; in Du Noyer's time a very small round "kennel" remained to the north of the main door. Behind this triple hut are two other sites, one irregular in plan, but perfect, and 6 feet high; the other was circular and nearly levelled.*

Sometimes circular pits occur in or round forts of sufficient regularity to suggest "dug-out" huts. We have found them round a fort in Caherminane; numerous circular hollows down the green slope on which the caher stands. They possibly resembled one we noted a few years ago at Mweenish in Connemara. It was dug out of a sandhill, the roof resting like a cover over it, and was sheltered by a low wall.† It is of modern date.

59. **Water Supply.**—So far from endeavouring to secure an unfailing supply of water within their walls, the fort-builders were careful rather to exclude any well or spring that rose near the site selected for their enclosure. Strange to say, this curious fact was not confined to Ireland; it has left its mark on the greatest literatures of the world. We recall the pathetic incident of the well at the gate of Bethlehem whence intruders, though with risk of bloodshed, could draw water; or those springs before the gates of Ilium, where the ladies had washed their robes in peace before the Achæans came, and to which the fated Hector ran, pursued by his deadly foe. Schliemann found two springs 400 yards from the citadel of Hissarlik,‡ and Tsountas mentions a spring 325 feet east from Mycenæ, which fortress had to trust to water-supply outside its walls.

* Fully described, Trans. R.I.A., xxxi., p. 247.

† An illustration appears in a paper by Charles Browne, M.D., in Proc. R. I. A., ser. iii., vol. vi., p. 524, Plate.

‡ Schliemann, "Troy and its remains," p. 194. "Mycenæ and Tiryns," p. 40. Tsountas, "Mycenæan Age," p. 40.

Hirtius also records how Uxellodunum was reduced by the Romans, because its only spring lay outside the walls.* The same fact appears in Irish Literature. Columba, Adamnan tells us, prophesied that the well near the fort Dun Ceithern (The Giant's Sconce) should be defiled with human blood. "The Colloquy of the Ancients" mentions "a hidden well to the south side of a fort" which is suggestive of the spring hidden in the abattis to the south of Ballykinvarga caher.† The "Voyage of Maelduin"‡ also tells of a "fountain flowing past a fortress," and apparently filling its fosse.

This peculiarity probably sprang from a wish to avoid the pollution of the water supply; there was, too, comparatively little risk of blockade.

Lack of water in the "Celtic" forts seems the rule everywhere. We find no example of an included well in any description of a fort in Bosnia or Bohemia. The Schlossberg, in Alsace, has a spring a short distance from its wall. Dr. Christison notes that nineteen out of twenty forts in Pembrokeshire have no water-supply, and that the same is generally true of Scottish forts.§ Caerconing, in Cornwall, has a well 40 or 50 yards distant from its rampart. St. Margaret's Well, in Kirkcudbright, lies near the promontory fort called Raeburn Castle. While Stokesleigh Camp, near Clifton Suspension Bridge, on the Avon, has an ancient pool outside its enclosure,‖ and the promontory fort of Llanunwas, in Pembrokeshire, has a well and stream before its outer mound.

Among Irish forts we may note that the wells Neamhneach and Laegh lie respectively 70 and 230 yards from the nearest forts at Tara. The Mote of Slane is 160 yards from the Abbey well. The nearest water to Dun Aenghus is at least a quarter of a mile distant. Cahercommaun is 730 yards from the streams of Teeskagh;¶ while at Innismurray the

* "De Bello Gallico" (appendix by Aulus Hirtius), Lib. VIII., cap. xli.

† Adamnan's "Life of St. Columba" (Ed. Reeves), pp. 93–96. "Silva Gadelica," vol. ii., p. 195; see also pp. 103–131.

‡ "Voyage of Maelduin" (*Revue Celtique*, vol. ix., 1898), section xvii.

§ Dr. Christison, "Early Fortifications of Scotland," pp. 227, 228.

‖ "Bristol, Past and Present" (Nicholls and Taylor), vol. i., p. 7.

¶ There may have been a nearer spring, but, if so, it lay some distance down a steep crevice path called Scalpduff leading down the precipice to the east.

wall of the Cashel actually bends from the circle to exclude a spring. The promontory forts are usually waterless, but the motes are frequently on or near a stream, and sometimes had a sunken way leading to the water.

Occasionally, however, a well is found in a "Celtic" fort. We hear of a well with three pillars in the fort of Duntrileague in Limerick,* and of the "lowly fort in which is a little well."† Grimspound, on Dartmoor, has a well in its rampart. Chun Castle stone fort in Cornwall has one in its garth; and Berry Hill fort, near Winterbourne, not very far from Bristol, has a well inside. In Ireland, Cahercrovdearg, Kerry, has an undoubted holy well with a rude altar and stations; while Cahermackerrila, in Killeany parish, Clare, is said to enclose another well dedicated to St. Colman Mac Duach. We do not recall other examples in the fort-abounding districts along the Atlantic, but a few inland raths have springs in their fosses or in the outer rings.

60. **Places of Assembly.**—Both in Scotland and Ireland, as was to be expected, assemblies were held at or in forts. This was especially the case with the motes, and is maintained to this day at the Tyndwall in the Isle of Man. Most unfortunately the ancient Thingmote of the Norsemen of Dublin (which stood between St. Andrew's Church and Trinity College, on the site occupied by a block of houses) was levelled to fill up the lower edge of the College Park when the present Nassau-street was made. The Thingmote was a large terraced mound, apparently without a fosse. At Greenmount mote in Louth, and several motes in Wicklow and Wexford, similar traditions of assembly or "parliament" exist. The mote of Magh Adhair was the actual mound used for the inauguration of the Dalcassian Kings and as such was used down to the reign of Elizabeth. In it we apparently find a good example of the sepulchral mound becoming the place of an assembly or fair, and thence for its publicity becoming the place of installation for the local kings. Professor

* "Silva Gadelica," vol. ii., p. 130, "a good caher, in the midst was a well."

† Cormac's "Glossary" (Ed. W. Stokes), p. liii.

Sullivan cites a case of a king using a sepulchral mound as a place of council.* The "Annals of Ulster," in A.D. 803, tell how "the senators of the Ui Neill met in Dun Cuair."

The place of inauguration of Hy Fiachra Aidne, in southern Galway, consisted of a stone fort enclosing a venerated birch tree, the "Rovehagh." It was destroyed, as already related, in 1143, but has left its name to our days.

61. **The Question of the Heights of the Forts above the Sea.**—This has, perhaps, been made too weighty a question. On our mild western coast, a fort on the sheltered side of a mountain, 1000 feet above the sea, would have been a more comfortable, if not also a safer and healthier, residence than on a bleak inland plain or a stormy valley; and how a valley can concentrate a fierce and bitter storm into an intensity unknown even on the plateaux above it, those best can know who have worked in the field as well as in the study. The following are the heights of a few of our most loftily-seated forts:—Mac Art's fort, Antrim, 1181 feet above the sea; Caherconree, on Slieve Mish, Kerry, 2050 feet; Aghaglinny, near Black Head, Clare, 1045 feet; Rathcoran, Wicklow, 1256 feet; Cuchullin's House, Kerry, about 1700 feet; Caherbla, Kerry, about 1926 feet. At Fahan and in the Burren, the forts and clochauns seldom lie farther up the hillsides than 700 or 800 feet.

62. **Forts lie across the Country in line with each other.**—Many examples might be given in Ireland, and some in Scotland and Hungary; but we need only consider the very striking cross-lines of forts near Kilfenora, Clare—the one begins at Caherkyletaan, running southward through Cahercuttine, a dolmen, Caherawalsh, Cahernaspekee, a nameless square "moher," and the fort of Ballyganner south, to the great dolmen on the hill above Ballyganner Castle. The cross-line commences at the "moher," above the wall-circled dolmen in Ballyganner north, and passes through Caheraneden, a ring-wall with a slab-hut, Cahernaspekee and the lesser and greater cahers of Ballykinvarga, to the prominent hill fort of Doon.

* "Manners and Customs of the Ancient Irish," p. 638.

63. **The occurrence of Forts close to Dolmens, Pillars, and Circles,** is a very equivocal fact. Whether one of them, or, if so, which object, was first constructed is hard to say. In some cases we may presume that the pillars and smaller cists and cairns were later than the fort; but the comparative ages have yet to be fixed.*

64. **Selection of a Sloping Site for a Fort.**—This was recognised by the ancient Irish in such names as Claen rath, and is a phenomenon of very common occurrence among both Irish and Scotch forts. The selection, apart from questions of drainage, may have arisen from a wish to secure a situation at once lifted above the mists of the plain, and yet sheltered from some prevailing wind, which would have been violent on the more level summit. Strange to say, however, the garth is not as a rule "terraced-up" to a level, as could very easily have been done; but a similar carelessness of an uneven garth appears in many cahers whose interior has rough outcrops of rock, and is often more uneven than the fields outside the walls.

VI.—Distribution of Types.

This section is intended to describe briefly the distribution of various kinds of forts in Ireland with typical examples of each kind. In order to minimise the risk of losing sight of the common type by only studying the more remarkable forts, it is endeavoured to collect examples from various districts. Reference is also made to any full descriptions already published. A few of the districts in which the stone forts exceptionally abound are described as groups; but of course there are many other parts of the country, as, for example, the Curragh of Kildare, where the less interesting earth-forts are equally abundant, and we cannot refrain from mention of one group in Tipperary.

65. **Groups.**—*Corcaguiny, Kerry* (Ordnance Survey Maps, six inches to one mile. Kerry, Sheets Nos. 33, 34, 42, 43, 52, 54).—Without doubt, the most important group in Ireland of 210 forts, 56 gallauns, Ogham pillars,

* Noteworthy groups of forts, pillars, and dolmens occur, as for example: at Feenagh, Leitrim; Deerpark, Sligo; Ballyganner, Clare; and Ballynabortagh, Cork.

509 clochauns, souterrains, and promontory forts, besides 15 churches and 3 castles, lies in the barony of Corcaguiny, at the end of that great peninsula, and to the west of a line from Minard Head to Brandon Head. The beauty of the surroundings and interest to naturalists, botanists, and geologists add to its attractions; and yet, as a "pleasure resort" of the first-class for scientific people it is known to comparatively few. It is to be regretted that, by the imprudence of tourists, the younger population of the Fahan townlands (as in Inishere and elsewhere), is deteriorating into what must soon prove to be very little better than a band of persecutors, to the great annoyance of visitors to that group of ruins. Elsewhere the peasantry usually retain their old courtesy, kindness, and self-respect. The district covers about twelve by seven miles.

The *Corcaguiny group* may be divided into sub-districts. Only one group has been successfully worked out by the industry of the late John Windele, George DuNoyer, and Mr. R. A. S. Macalister. This is the *Fahan* group of 460 remains, including the important ring-forts of Caherconor, Cahernuadh, Cahernamairtineach, and 27 others, the promontory forts of Doonbeg and Doonmore, 414 clochauns, 18 pillars, and 2 Ogham inscriptions, besides, doubtless, some other antiquities as yet unrecorded.

The *Smerwick* group, round the picturesque bay of that name, comprises some 33 forts, 11 clochauns, 12 gallauns, and the probable remains of a promontory fort at Doon Point, now occupied by Ferriter's Castle. Among the forts are included the two called Caherdorgan, the two called Cahernagat, and those of Ulligadrevil and Rahinnane; the latter occupied by a late castle, and figuring in the legend of "the Battle of Ventry."

The *Ballyheabought* group, some 51 forts, 49 clochauns, and 18 gallauns; some of unusual interest. The *Ventry and Dingle shore* groups, 49 forts, including the great ringed cliff fort of Doon, on a headland of the small peninsula south of Dingle bay (it encloses a giant's grave); also a dolmen, 6 gallauns, and the extensive group of Ogham monuments in the fuchsia-planted fort of Ballintaggart.

The *Ballynavenooragh* group, on the western slopes of Mount Brandon, some 9 forts, 24 cloghauns, 2 calluraghs.

From *Minard Head* to *Bull's Head* and *Anascaul*, some 40 forts, 11 cloghauns, and 7 gallauns.

66. *The South Burren Group, Clare* (O. S. Maps, Nos. 5, 9, 10, 16, 17).—Inferior to Corcaguiny alone, stands the great group of prehistoric remains on the limestone slopes of Burren. The chief group extends, roughly speaking, as an isosceles triangle, with a base of six miles and a height of seven, from Kilfenora and Leanna to the hill above Ballyallaban. It

comprises in all 189 forts, 3 tumuli, 3 large cairns, 47 dolmens, 3 pillars, 6 churches, 4 castles, and smaller cairns and hut-sites innumerable, and has been described (though much is briefly and imperfectly treated) by the author of this paper.*

It, too, can be classed into lesser groups, though by a somewhat arbitrary division, as there is no absolutely isolated collection of ruins anywhere in the main district. *Kilfenora-Ballyganner group* with the important cahers of Ballykinvarga, Caherlahertagh, Caherminane, Ballyshanny, two in Ballyganner North, one with a small ring-wall, which once was of unusual height, the other encloses a dolmen partly embedded in its wall. The fine fort of Cahercuttine, Caherwalsh, Caherkyletaan, Cahernaspekee, and thirty-eight others, ten dolmens, several souterrains and countless cairns, three of some size, hut-sites, slab-huts, a rock-cut road, etc., etc.

The district from Lemaneagh to Kilcorney, with Cahermore, Sheshy, Caheraclarig, and sixteen other forts, and two dolmens. The *Slievenaglasha group* (from Parknabinnia to Castletown and Cappaghkennedy) with the forts of Cahermore-Roughan, Cahermore-Glenquin, the great triple fort of Cahercommaun, the rock-fort of Cashlaun Gar, Mohernacartan, Knockans Fort, the lake fort of Cahersavaun, and thirty-six others, two great cairns and many lesser ones, seventeen dolmens and a tumulus. The group of *Eanty, Poulacarran* and the plateau of *Commons* with the forts of Poulacarran, Poulcaragharush, Cahermacnole (Cahermackirilla), Cahergrillaun, Moheramoylan and forty-six others, two tumuli, four dolmens, three pillars, and numerous cairns.

The *Kilcorney* and *Glensleade group*, with the forts of Caherconnell, Cragballyconoal, Cahercashlaun and Caheranardurrish and forty-four others, eight dolmens, the cairn of Poulawack, and many other lesser cairns. The *Gleninshen* and *Ballyallaban group* with the fort of Cahermore-Ballyallaban, and six others, five dolmens, and uncounted cairns.

67. *Lough Hackett Group, Galway* (O. S., Nos. 42, 53, 56).—The great group to the north-east of Lough Corrib covers a district 7 by 14 miles in extent. It lies round Lough Hackett, the ancient Lough Cime, connected traditionally with Cimbe Cetharcenn, one of the sons of Huamore. It is as yet undescribed, save Cahergel. It consists of ninety-one forts and numerous other remains.

It contains Caherman, a triple fort, Cahernaheeny, Caherachoola, Caherconnaught, Cahermore, Caherlustraun, Caherkeeny, Cahergortmore, Cahereenard, Caherduff, Caherballycolgan, Caherbohercuill, Cahirebrick, Carheenard, Caherabeg, Lisheenacarna, Caherhugh, Cashlaunfeekul, Caher-

* Journal R.S.A.I., xxvi., 1896, pp. 142, 363; xxvii., 1897, p. 116; xxviii., 1898, p. 353; xxix., 1899, p. 367; xxx., 1900, p. 400; xxxi., 1901, pp. 1, 273. Proceedings R.I.A., vol. v., ser. iii., p. 544.

biggora, Cahermoneenkirka, Lisnabrock, Cahermacanally. Southward, towards Lough Corrib, lie Cahernagat, Cahermorris, Lisheen, Caheranairgid, Caheranore, Caheranane, Caherhughy, a large fort with high ivied walls; and further westward, Milla fort, Cahergel, a fine stone fort with steps, &c. (section 93, *infra*), Cahernadane and the fortified island of Illaunacarbry.

68. *The Dunkellin Group, Galway* (O. S., Nos. 83–85, 96–98, 103, 104, 113).—The district is about 10 miles by 7 miles in extent, and lies at the eastern end of Galway Bay from Oranmore to Craughwell, and southward to Ardrahan and Finvarra. It is connected traditionally with Taman and Beara, the sons of Huamore, and possesses over 50 cahers, beside other remains. The district of Roevehagh contained a venerated birch tree and was a place of inauguration. The forts of Caheradrineen,* Cahercugeola, and a neighbouring fort have been described; it may be remembered that in the Caher of Knockgarranebane were found stone-moulds for casting two-looped bronze spears. Caherpeak is a large fort enclosing a church.

It includes Caherroe, Caheracullin, Caheradrine, Cahernalee, Caherfinesker or Cahermore, Carheenascovoge, Cahercrin, Caheraphuca, Caherlisdacus, Carheenadiveane, Caherfurvaus, Cahercaltragh, Cahernanoole, Caher, Caherybrogan, Cahermore, Caherbeg, Cahershanbacky, Caheraloggy, Cahermore, near Roevehagh, Lachtloughlin fort, Caherlissagunna, Caherbeg, Caherpheepa, Cahergorman, Caheririllaun, Caherweelter, Caheryrory, Cahercuildoish, Cahergalloon, Cahershaneykelly, Cahernalinsky, Caherateige, Caherdaly, and the large earth-fort of Rathmorrissy.

69. *The Aranmore Group, Galway* (O. S., Nos. 110, 119).—The group in the North Isle of Aran, though numerically small, is of great importance, and was of still greater value to archæology in recent memory, but within the last quarter of a century the defacement of the village ruins at Iararna and Ballynasean, and the rebuilding of so much of the interiors and tops of several of the cahers not a little diminished the value of many of the remains. It possessed 9 cahers, 2 dolmens (at least), about 50 clochauns, with pillars and other remains, beside two castles, a round tower, twelve churches, and two high crosses.

It comprises the great forts of Dun Aenghus, Muirbheach Mil, Dun Onacht, Dun Oghil, Dubh Cathair, four defaced cahers near Dun Oghil and Cowroogh, besides other remains.

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* Caheradrine on maps, see section 95, *infra*.

70. *The Cooleagh Group, Tipperary* (O. S., 62).—This is as yet undescribed, and we may hope that ere long this omission may be made good by local archæologists, who would find in Cooleagh and the district near Cashel a subject for several valuable papers.

It consists of three small ring-forts and a curious village site in Mortlestown Castle demesne; a straight-sided fort named Lismortlagh, a rath, a rath in an irregular straight-sided enclosure; a four-ringed-fort with a bastion at the entrance; two double-ringed-forts in Grangebarry, eight lesser ring-forts in Coolbaun and Cooleagh; near one is a "diamond" fort, and close to it a double-ringed-fort 350 feet across, with curious enclosures adjoining it. A large fort 550 feet by 500 feet in Shanakyle, and two ring-forts. Three double-ringed-forts and ancient roads in St. Johnstown and Higginstown.

As for the distribution of the various types of forts we may briefly note that the ring-forts abound all over the country and do not seem to have any marked racial peculiarities or bearing. The square forts, though much less plentiful, are equally widely distributed; they seem to be most abundant in county Wexford. The promontory forts abound all round the coast wherever the builder could find a suitable headland: in many cases they have been nearly defaced, and the name Doon often attaches to heads where no trace is now discoverable. The motes, whether simple or complex, are most plentiful in the eastern half of Ireland, and few are found in Munster or beyond the Shannon and Lagan. The rock-forts and walled islands are only varieties of the ring-fort, and are practically confined to the northern and western coast counties. Long entrenchments occur chiefly in Ulster, those in Munster not being well marked.

The succeeding notes are to be understood as rather forming an excursus or appendix, not being in the least degree intended to supply full descriptions, but rather to bring together the more instructive facts about the structures, and to supply a partial bibliography of the forts.

Ring Forts.—*Royal Residences:*—

71. *Emania, Armagh* (O. S., No. 12).—Chief in importance among the royal residences of the old Irish mythology and legend stands Emania. The great Ultonian rath lies on a hill slope not far to the west of the Archiepiscopal city of Armagh. The legend of how Queen Macha marked out its plan with her broach and its connexion with the heroes of the Red Branch (still recalled by

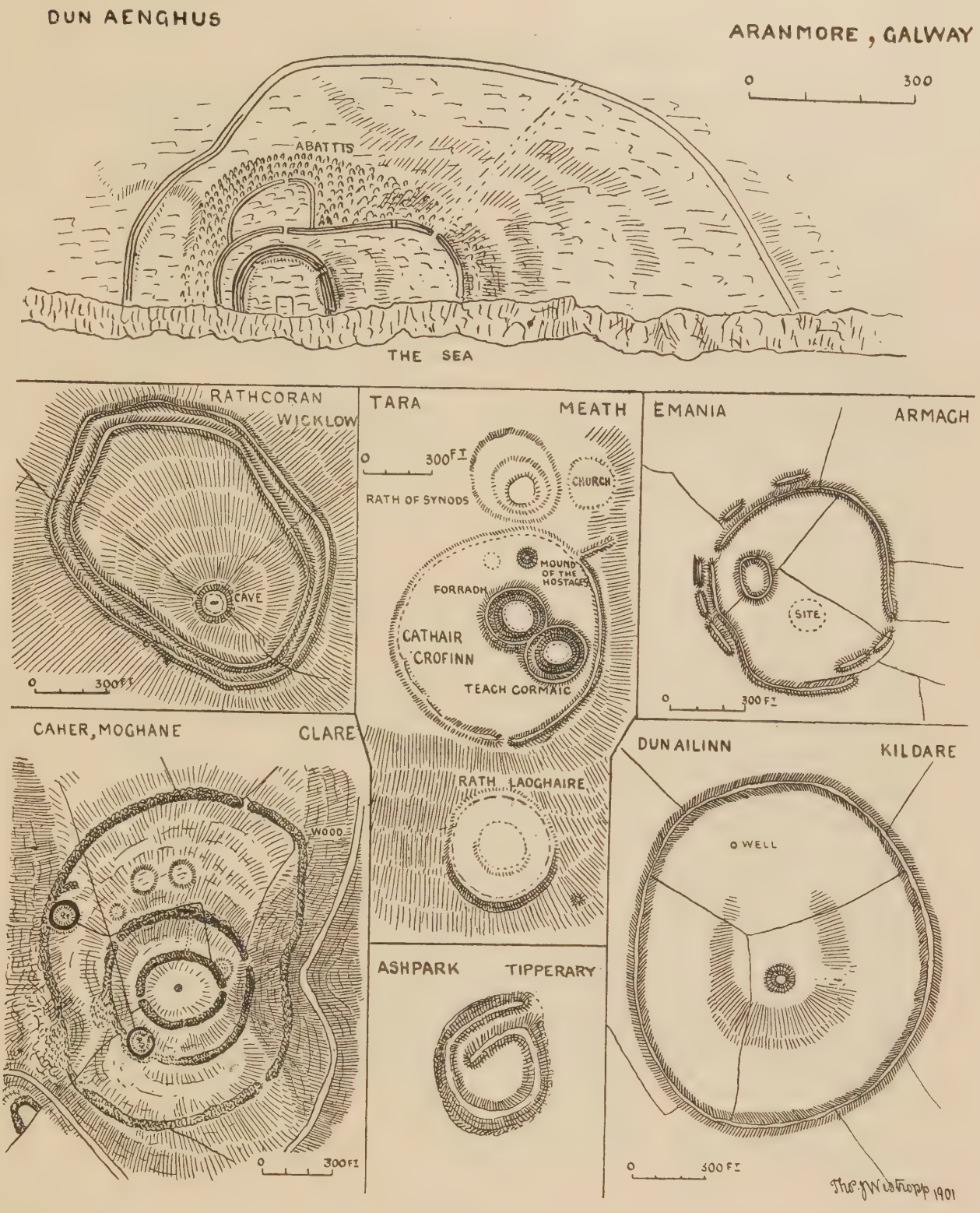

FIG. 19.—TYPICAL IRISH FORTS.

the townland name of Creeveroe, near it) are well-known. It was devastated in A.D. 322 in the Wars of the Collas. The ancient name has ever since clung to the site, "Emhain of the Fairs" in the Annals in A.D. 898, and (as Bishop Reeves has shown from various Latin and Irish documents) Hewynna 1374, Eawayn 1524, Eawyn 1609, and "The Navan fort," its present name, 1633. It is possible that it is the more northern "Rigia" of Ptolemy," the word being possibly connected with the term "Eamhain of Kings."

It was probably at one time a stone fort, for the Calendar of Oengus, when contrasting the fates of the pious and their cities with those of "the Princes of the world that have come to nought," records that—"Eman's burgh has perished save that the stones remain."* It is not wonderful that no trace of the stonework exists in our day for, in 1145, "a limekiln, 60 feet every way, was erected opposite Eamhain Macha by Patrick's successor." The eastern segment and one of the inner forts were levelled even since the date of the first Ordnance Survey maps.

The fort consists of a great earthwork forming an irregular circle 850 feet across, perhaps at one time consisting of two mounds. Within the garth were a mote and fort, the latter remains—an oval rath on the higher slope. *Descriptions*—"Ancient Churches of Armagh," Dr. (afterwards Bishop) W. Reeves (1860). Journal R.S.A.I., vol. xvi., 1884, p. 409.—*Revue Celtique*, vol. xviii. Emania, M. D'Arbois de Jubainville, from notes by Rev. Maxwell Close. View, plan and section. See figure 19, *supra*.

72. *Tara, Meath* (O. S., No. 31, 37).—This deeply interesting group of forts, the residence of the Ardrighs of Ireland, subsisted from prehistoric times as a most important social and political centre. Having been cursed by Ruadhan of Lorrha in consequence of a quarrel with King Dermot, it became deserted on the death of that monarch A.D. 567. The Dindsenchas gives elaborate descriptions of the names and positions of the various forts, wells, and monuments. The whole having been treated at great length in the Transactions of the Royal Irish Academy, we must confine ourselves to brief notes of the existing remains alone. Cathair Crofinn or Rath na Riogh, a large, nearly oval earthwork 853 feet across, but much levelled, consisting of a fosse and mound; inside it are two conjoined high raths, the Forradh, 276 feet in diameter and Teach Cormaic, 244 feet in diameter. Towards the northern segment of the great enclosure were two tumuli, the Dumha na nGiall and the Dumha na mBo; the former was crowned by the pillar-stone now set on the Forradh. Rath Laoghaire, the latest of the forts, and dating from the first half of the fifth century, is a large defaced ring on the hill slope south of Cahercrofinn. It was made by the Ardrigh Laoghaire, son of Niall of the Nine Hostages, and is 300 feet in diameter. Its builder was buried in its rampart to the south. A triple ringed, circular, low fort, the "King's Chair," or the "Rath of the Synods," lies to the north; it has been recklessly cut into and defaced in the ill-conceived search for the "Ark of the Covenant" (1899). Nothing was found but animals' bones, rusted iron, and one burial; the trenches were cut into the rock. There were two tumuli towards the N.W., and Teach Mairiseo (built in the 3rd century by the Ardrigh Cormac Mac Airt) to the S.W., but they are now entirely defaced, though traces of the tumuli were extant when the first Ordnance Survey took place. The Protestant Church stands in another rath; near it is a sand-

* "Calendar of Oengus." Ed. W. Stokes, p. 18.

stone pillar with a sheelanagig cut in relief. Teach Miodhchuarta, the banquetting hall, lies down the northern slope. The great side mounds remain with fourteen entrances, and enclose a space 760 feet long and 46 feet wide. To the west lies another group of raths, the northern, Rathgrania, lies on the steep edge of the hill, its deep fosse dipping boldly down the slope; it is 260 feet in diameter. Close to it, on the south and east, are two more forts, Fothath Ratha Graine and Rathcaelchon; the latter is a commonplace rath with a fosse and mound, and is 220 feet in diameter. The well of Laoc lay near Rathgrania and is stopped, but the site is known; the same remark applies to the well Laegh. The well Neamhneach is still flowing down the slope to the east of Cahercrofinn.

The large group of forts down the northern slope has perished; it included Treduma Nesi and the Raths of Conor MacNessa and Cuchullin, the monument over the latter warrior's head and neck and many other remains. *Descriptions*—The standard work is of course Dr. Petrie's essay in the Transactions of the Royal Irish Academy, vol. xvii. Some smaller additions appear in a paper by Rev. Denis Murphy and T. J. Westropp in the Journal R.S.A.I. (xxiv.), 1894, p. 232. No scientific account of the recent unfortunate excavations has as yet been published. See figure 19, *supra*.

73. *Rathcroghan, Roscommon* (O. S., No. 22).—The palace of Ailill and Maeve, which figures conspicuously in the legend of the Táin bo Cuailgne. Were it not for this fact the remains of the forts would have attracted but little notice. Rathcroghan itself is a large, flat-topped, earthen fort (225 feet by 170 feet, and 995 feet round the base; it is 35 feet high). It has no fosse, and still preserves it sancient name. O'Donovan, in his notes for the Ordnance Survey, 1837, thinks that it had formerly an outer circumvallation. A large prostrate pillar 9 feet by 2½ inches by 2 feet 2½ inches called Misgaun Meva, and another large block called Milleen Meva preserve the memory of the Amazonian Queen, and lie to the N.W. and N.E. of the rath.

There are five other forts scattered around it, Rathnascreg, Rathmore, Rathnadarv and two others. Further to the south are Cahernabavalady (the caher of the feasting party), the grave of Ceat Mac Magach, and the remarkable burial-places and souterrains of Knockaunagorp; the Cairthe dhearg, or red sandstone pillar of the Ardrigh Dathi (died A.D. 428), a stone 6 feet high and from 5 feet to 2 feet 8 inches wide;* Relig na ree and Owneynagat. The Ogham inscription "FRAICCI MEDFFI," or, "FRAICCI MENGFI," formerly attributed to a son of Queen Maeve, was found on a roof support of the latter souterrain. The "cave" exists in the remains of an ancient tumulus 50 feet or 60 feet in diameter; there are fallen cists. There are slight traces of the Cashel of Mannanan, three-quarters of a mile to the S.W. of Rathcroghan. The Relig na Ree is an irregular ring enclosure, with stone facing, 800 yards south of the rath, 336 feet in diameter: touching its northern segment is a small circular enclosure 100 feet in diameter; another low wall crosses the Relig, and there is a "cave" in its garth. *Description*—Relig na Ree and Dathi's Pillar are figured and described by Sir Samuel Ferguson, Proceedings R.I.A., vol. i., Series ii., p. 114. The Rath, by R. R. Brash "Ogham Inscribed Monuments," chapter xiii., p. 299.

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* See *supra*, section 44.

74. *Usnach, Westmeath* (O. S., No. 24).—A remarkable hill-town, four miles north-west from Castletown railway station. The hill is grassy, and has two low summits; an ancient road led up the southern slope to the enclosures. The cemetery is an irregular circular earthwork, 250 feet across, with a lesser enclosure, 180 feet across, to the west. The main division (like the Relig na ree at Rathcroghan) has five enclosures, with tumuli and chambers. A "cave" and other collapsed chambers remain in the western division. The "Cat Stone" (a singular and cromlech-like group of stones, but probably a natural out-crop of rock) and an enclosure of stones set on edge, called "St. Patrick's bed," lie near the fort. Usnach is attributed to Tuathal Techtmar, *c.* A.D. 80. *Description*—Sir Samuel Ferguson, in Proceedings R.I.A., vol. I., Second Series, p. 140.

75. *Kincora, Clare* (O. S., No. 36).—Only two forts remain to represent the dwellings of the early Dalcassian princes near Killaloe. Grianan Lachtna occupies a noble position on a shoulder of Craglea overlooking the lower end of Lough Derg, the Shannon, and Silver-Mine hills,

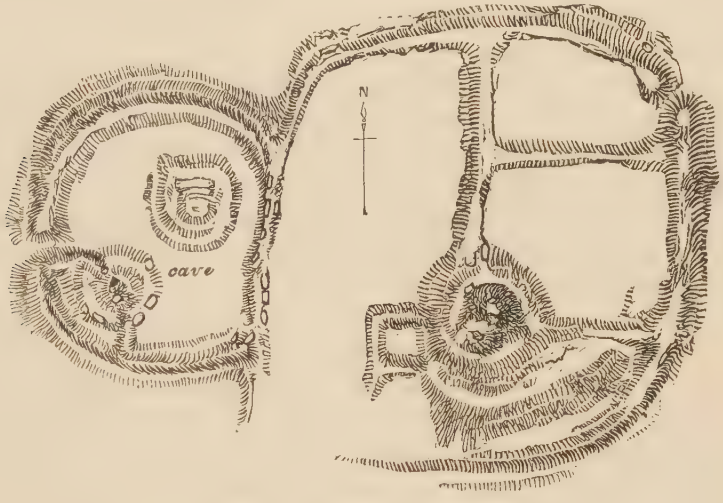

Fig. 20.—Usnach, Westmeath.

to Slieve Kimalta, the Keeper Hill. It is an oval fort, 134 feet to 116 feet in diameter, with a fosse, 17 feet wide, and an earthwork. In the centre rises an oblong heap of stones, 80 feet by 50 feet. The fort was built by Lachtna (great-grandfather of Brian Boru, *circa*, A.D. 840).*

Beal Boru derived its name from the ford "Beal atha Boroimhe," or "Borama." Mahon, King of Munster (brother of Brian), is called "fiery King of Boroimhe"; and it is most probable that from it, and not from the alleged re-imposition of the Leinster tribute, that Brian received his surname. The ort is a high earthwork, 20 feet high, with ramparts and a fosse, now nearly filled up; it measures 380 feet round the top, and 650 feet round the base. It is dug

* See its history from ancient MSS. in the "Book of Munster," in Journal R.S.A.I., vol. xxii. (1892), p. 892, and "Story of an Irish Sept," by Dr. Nottidge Macnamara, p. 74.

at the end of a natural spur, near the Shannon, at the end of Lough Derg. Kincora lay at the head of the weir and bridge of Killaloe, probably where the chapel stands. It was entirely destroyed in 1118, and its timber and stone-work thrown into the river; but it was again rebuilt. It had stone enclosures and a well with two salmon in it. *Description*—T. J. Westropp, Journal R. S. A. I., XXII. (1892), pp. 191–193.

76. *Grianan Aileach, Donegal* (O. S., No. 47)—A strong fort on a hill,* commanding a fine view over Lough Swilly. There are remains of four ramparts, but it once possessed five, according to the "Book of Lecan" (p. 255):—"Dun, to which led horse-roads through five ramparts." The innermost enclosure is a dry stone wall, largely rebuilt by Dr. Bernard; but he carefully preserved and marked the limit of all the ancient work. As it existed, when Petrie described it for the Ordnance Survey, it consisted of a strong ring-wall, 6 feet high, enclosing a nearly circular garth, 77 feet 6 inches across. The wall was 15 feet thick at the base. There was a gateway to the south; the lintels had fallen; the sides were of coursed masonry, less worn than the outer facing of the rampart; the opening was 6 feet 7 inches high, and from 3 feet 10 inches to 3 feet 1 inch wide. Inside the wall, to the right hand as one entered the fort, were considerable remains of the lowest terrace and a wedge-like flight of steps, widening upward in the face of the wall, and 2 feet 6 inches at the widest. Farther to the right was the entrance to a long passage in the wall, like the passages in certain forts at Fahan, Kerry; beyond this was a double flight of steps. Another double flight and the entrance to another passage in the wall lay to the left of the gateway, and, farther round, there was another flight of steps. The rampart had a batter of 1 in 6, and there was a drain under it to the north, and remains of a midden and of a late mortar-built foundation in the garth. The whole was nearly buried in the fallen stones. The fort makes some figure in pre-historic tradition, and was an important residence of the local princes; it was deserted A.D. 675, despite of which it was further ruined by Murchad O'Brien titular King of Ireland, in 1102. *Descriptions*—Dr. George Petrie, "Parish of Templemore Ordnance Survey of the County of Londonderry" (1837), vol. I., pp. 214, &c.; Richard Rolt Brash, "Ecclesiastical Architecture of Ireland," p. 4; Dr. Walter Bernard, Proceedings R. I. A., vol. i., series ii. (1879), p. 415. Plans in all, and illustrations in the first.

The Largest Ring Forts:—

A large structure seldom fails to be an exceptional one, for reasons apart from that of mere size, so much so, that the tendency to give such works a prominent place in all descriptions, though natural, frequently gives a most misleading impression of the characteristic types prevailing in the country. For convenience of reference we have collected the largest of our Irish forts in this section. Although there is nothing abnormal in the large raths of Dun Ailinn, Cashel, and Rathcoran, still Dorsey,

* Figure 21, *infra*. The reference letters are: *a* entrance, *b* passages, *c* steps, *d* drain.

Moghane, Langough, and Dun Aenghus demand exceptional attention in these notes.

77. *Dorsey Dun, Armagh* (O. S., No. 59).—A large and remarkable ring earthwork, of irregular plan, in the barony of Upper Fews. It measures about a mile from east to west, and 600 yards across. The west end is nearly semicircular; the north-east forms nearly a right angle. The fortifications consist of an earthwork, with deep fosses on each side and lesser mounds outside. The site is intersected by two streams, and, in the marshy parts, the rampart rested on piling, as in the earthworks of northern Germany and the fort of Dungorkin.* To the west side of the marsh, in the centre of the Dun, are two small knolls of rock, fortified with dry-stone ring-walls, and to the south-west, inside the earthworks, on a rising ground, is a stone pillar, "the white stone of Calliagh Beri," *Description*—Rev. W. H. Lett, Journal R. S. A. I., XXVIII. (1898), pp. 1–14. Plan, sections, and illustrations. See figure 21, *infra.*

78. *Dun Ailinn, Kildare* (O. S., No. 21).—A large but injured earthen ring-fort on a hill, about 500 feet high, near Kilcullen. The fortification consists of a fosse and earthwork faced with small stones in some places; it measures about 1600 feet north and south, and 1350 feet east and west, enclosing a well, dedicated to St. John, in the north-west segment. The summit of the hill was capped with a small low fort and oblong enclosure about 100 feet in diameter. The A.F.M., A.D. 904, quote a poem which names Almhain and Aillinn as separate places; so the the latter is not the legendary palace of Finn. See figure 19, *supra.*

79. *Moghane, Caher, Clare* (O. S., No. 42).—A large triple stone fort, possibly the Cathyr-nachyne of De Clare's rental, 1287, and Cahermoghna, 1655. The fort and hill are shown in two Elizabethan maps in the Hardiman Collection.† [Like Dun Ailinn, it girds a gently rising ground, 263 feet high, and commanding a view over the estuary of the Fergus and the plains of Clare, to Burren and Aughty. The three walls are nearly entirely overthrown, and amount to 7850 feet long, enclosing about 27 acres. The central ring-wall is 350 to 380 feet in diameter, and was from 17 to 21 feet thick,‡ with entrances to the east and west. The second is 650 feet across, and embodies a better preserved circular fort, 100 feet in diameter in its southern segment. The outer wall conforms to the steepest faces of the hill, enclosing a space over 1500 feet north and south, and 1100 feet east and west. It also embodies a circular fort to the west. There are traces of radiating walls and circular enclosures between the middle and outer ramparts. Two defaced oval cahers and the complex caher of Langough lie at no great distance from the walls. *Description*—T. J. Westropp, Journal R. S. A. I., XXIII. (1893), p. 281, and Proceedings R. I. A., vol. VI., series iii., p. 440. Plans. See figure 19, *supra.*

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* The piling at both Dungorkin and Dorsey had cross beams and mortices. On the plan, A, D, E, G show the rampart, B piling, C the pillar of Calliagh Beri, F Stone forts.

† MSS., Trinity College, Dublin.

‡ The faces are exposed by the removal of the debris, and in the outer wall, to the west, where the foundations are laid bare, they are headers with small filling.

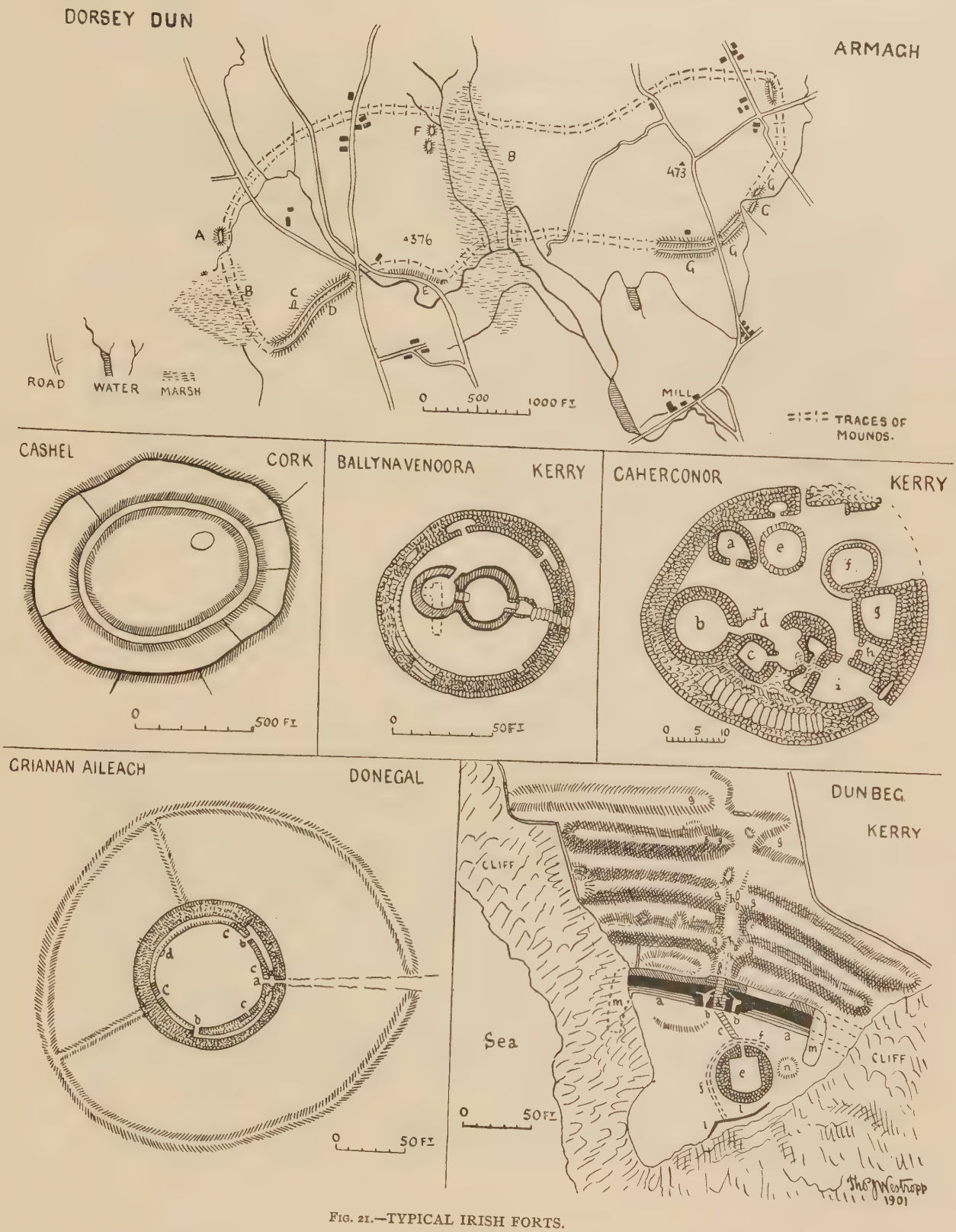

FIG. 21.—TYPICAL IRISH FORTS.

80. *Rathcoran, Wicklow* (O. S., No. 27).—This fine earthwork girds a lofty hill, 1256 feet high, overlooking Baltinglass. It consists of a small circular fort on the very summit, and a large irregular ring of two mounds and a fosse about 80 feet lower, and running nearly on a level (1181 to 1187 feet) round the hill. This encloses a space, 1400 feet north and south, and 900 feet east and west. In the upper fort is a kistvaen, or "cave," which, when opened, contained pottery and human bones. The upper fort is reduced to a cairn-like heap of stones.

Near this rath, on a slope to the north lies RATHNAGREE, another large fort of two ring mounds, the inner 400 feet in diameter, and the outer 600 feet; in it, early in the late century, was found a hoard of golden coins.*

81. *Dun Aenghus*, Aran Islands, Galway (O. S., No. 110.)—This well-known fort† lies on the summit of a hill and edge of a precipitous sea-cliff 300 feet high. It was known as Dun Inees in 1839. It is the only identified fortress, named in the legend of the Huamorian Firbolgs, in connexion with the chieftain Aenghus. It has been assumed that (like Moghane) it consisted of three rings, but it is equally probable (as already pointed out) that it rather resembled certain inland forts by having a ring-wall in the centre and crescent-walls outside, abutting on the cliff. Of the central fort only a crescent-ring remains 150 feet in diameter, the wall 12 feet 9 inches thick, and 18 feet high. It was built in three sections, the outer in parts rose 7 feet above the inner, forming a sort of walled path. This remained in 1839, but had disappeared in 1878, portions of the outer facing having by that time fallen displaying the face of the inner layer. To the south-east is a perfect gateway, with built sides and heavy lintel, rising, like reversed steps, inward. The ope is over 6 feet high, or only 5 feet 3 inches if we subtract the "step lintel," and 3 feet 4 inches to 3 feet 5 inches wide, as the jambs slightly incline; beside it are upright joints. The second wall is less regular in plan; the enclosure now measures over all 400 feet east and west, and 300 north and south. It has a gate to the north-east and a sort of bastion to the north-west. Outside this is a remarkable abattis of pillar-stones 3 or 4 feet high over a space 30 feet to 60 feet wide; the tops are channelled with age, and they are set "slope-wise" in the ground; many have fallen. The third, and outer wall, is thin and of irregular plan, manifestly an afterthought later than the abattis. Its enclosure measures over all 1174 feet east and west, and 650 feet north and south. The whole fort underwent extensive and in parts injurious repair during its conservation as a "National Monument" in 1881, and many of the flights of steps date from that time. *Descriptions*—Roderic O'Flaherty (1686), "Ogygia," p. 75, and "H-Iar Connaught," p. 76. C. C. Babbington, "Firbolg forts on the South Isles of Aran," Archæologia Cambrensis, 1858. Lord Dunraven, "Notes on Irish Architecture," vol. i., p. 1. Dr. Colley March, "The Age of Dun Aenghus," Society of Antiquaries (London), 1894. T. J. Westropp, Journal R.S.A.I., vol. xxv. (1895), p. 256.

82. *Cashel, Cork* (O. S., No. 96).—This fort lies in the townland of Clashinimid. It is a fine fort, measuring 1140 feet east and west, and 900 feet north and south, and has an inner oval ring-wall about 850 feet north and south, and 650 feet east and west, on a commanding ridge, with a

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* "Topographical Dictionary of Ireland," *s.v.* Baltinglas. † Plates LII–LIII. and fig. 19.

fine view around. Six traverses radiate between the rings at regular intervals. *Description*—Richard Caulfield, Gentleman's Magazine, 1865, part i., pp. 707, 710 (Reprints, Archæology), vol. i., p. 292.

83. *Langough Caher, Clare* (O. S., No. 42).—This fort has been already noticed (§ 47, *supra*) for its curious traces of rebuilding in early times. It appears to have consisted of a ring-wall, 100 feet in diameter, still extant, on the edge of a low cliff, and a large annexe, garth 600 feet by 300 feet, surrounding the remainder of the pear-shaped knoll of rock on which it stands. Two long walls ran southward down the slope enclosing a space 400 feet by 300 feet. In later times, a second enclosure, crescent-shaped in plan, was made across the pear-shaped enclosure, and the rest, with the exception of the central ring-wall, was levelled. It measures 450 feet long and 250 feet wide. The fort lies 500 yards south from Moghane Caher. *Descriptions*—T. J. Westropp, Journal R.S.A.I., vol. xxiii., p. 284, and Proceedings R.I.A., vol. vi., ser. iii., p. 442.

84. *Cahershaughnessy, Clare* (O. S., No. 34.)—This curious fort occupies a low marshy site, overhung by a hill, topped with a rath, in whose fosse, on the side next the caher, stands a low pillar-stone. The caher has two ring-walls. The inner is 166 feet to 148 feet across the garth; it has a defaced gateway to the north-west; this wall is 12 feet thick, and reduced to 6 feet in height, with large facing blocks and filling. In the garth are several enclosures and hut-sites, with the foundation of an oblong, dry-stonebuilding. The outer ring is not concentric; it measures 567 feet over all, and several radiating "traverses" cross its area. *Descriptions*—Arthur Gethin Creagh and H. B. Harris, with plans and drawings by T. J. Westropp, Journal R.S.A.I., vol. xxiii., p. 287. Proceedings R.I.A., vol. vi., ser. iii., p. 438.

85. *Other large Forts.—The Giants' Ring, Down* (given below), *Cahermore, Kilskeagh, Galway* (O. S. No. 71), 600 to 650 feet diameter; *Baunmore, Cork* (15), 750 by 600 feet; *Sillagh, Kildare* (24), 820 feet; *Rathgal, Wicklow* (37), two rings, 950 to 1050 feet, and 450 feet.

Other typical Ring Forts:—

86. *Innismurray, Sligo* (O. S., No. 1.) has been described at considerable length and carefully illustrated. It is, roughly speaking, pear-shaped in plan. The wall being from 7 to 15 feet thick at the base, from 7½ feet to 13 feet high, of fine, dry masonry with V-shaped flights of rude steps, and no trace of terraces. The fort is 175 feet to 135 feet across. It has the unusual feature of four, or perhaps five, entrances. The north-east is called the water-gate, and from it a covered way runs round the inner base of the wall. There are at least two cells in the wall, one circular, one oblong. The water-gate is perfect, 6 feet 3 inches high, and from 3 feet 5 inches below to 3 feet at top, with a massive lintel. The southern gate, with the wall near it, was entirely built by the workmen when it was conserved as a national monument in 1880. The low entrances are of a type unusual in forts, though not uncommon in souterrains, the passage rises abruptly under a domed cell; the outer door is 2 feet 8 inches high and 2 feet wide, the jambs being inclined. The other entrances are similar in character, and only differ by a few inches.* They

* See section 50.

are about 80 feet or 90 feet apart, and run through the thickest portion of the wall. The restorers, most unhappily, mistook the character of the steps, and built them up into straight-sided niches, extending to the summit of the wall. The inner enclosures and early monastic buildings do not concern the present paper. The well lies outside, but almost under the wall, and at some distance from the gateway. *Descriptions*—Lord Dunraven, "Notes on Irish Architecture," vol. i., p. 47, and Wm. F. Wakeman, in an exceptionally complete and careful description, R.S.A.I., vol. xvii. (1885-1886), p. 185. Republished as an "Annual Volume" by same Society.

87. *Giant's Sconce, Londonderry* (O. S. No. 6, but fort is not shown).—A cliff-fort on a bold rock above the pass from Dunboe to Largantea, and about 800 feet above the sea.

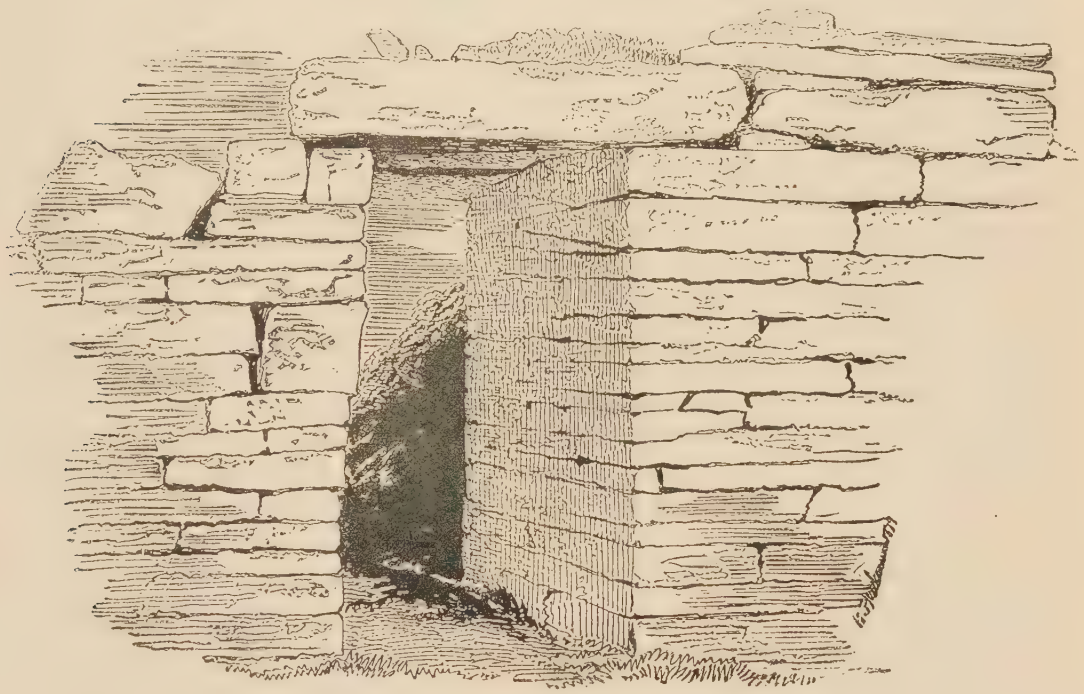

Fig. 22.—Principal Gateway, Innismurray, Sligo.

It is the ancient Dun Ceithern, the "Munitio Cetherni" of Adamnan's "Life of St. Columba," near which lay the well which the saint prophesied would be defiled with blood,* which was fulfilled in a fierce battle. The rock is difficult of access, save from the south-east, where there is a gateway 5 feet wide, and it is fortified by a wall of massive rocks; the interior has been hollowed, and a passage 2 feet wide and 40 feet long constructed through it to the N.E., with inclined sides, and roofed with large slabs. The entrance is 5 feet wide, with rough steps up to it. The ruin

*Adamnan (Ed. Bishop Reeves), pp. 93–96. The well is to the north-east.

commands a fine view from the Bann nearly to the Giant's Causeway. The rampart was defaced about 1808 by people looking for "a cove of money."

88. *Moneygashel "Cashel," Cavan* (O. S., No. 4).—Four miles from Black Lion. The fort lies on a hill sloping towards the south. It is nearly circular, and 84 feet in diameter, the wall being 10 feet thick, and about 8 feet high. Inside four flights of steps remain, two to the east and two to the north, in V-shaped pairs.* Only the foundation of the gateway remains; it was 3 feet 9 inches wide. On the southern, or lowest side, a drain runs under the wall, 14 inches by 18 inches. *Description*—S. F. Milligan, "Ancient forts in County Sligo" (and Cavan), R.S.A.I., Journal, vol. xxi., p. 580. Illustration.

89. *Giant's Ring, Down* (O. S. No. 9).—An enormous earthen ring 580 feet in diameter, with five gaps; the ramparts high, and 80 feet thick at the base; a dolmen lies in the middle. Its use was probably sepulchral, and not defensive. It seems to have a trace of a terrace. *Description*—Wm. C. Borlase, "Dolmens of Ireland," vol. i., p. 275. Illustrations.

90. *Caherspeenaun, Mayo* (not marked on maps).—A double-ringed caher near Cong. The inner garth is 130 feet across, the walls are of small stones, and are 10 feet thick and 6 feet high. At a distance of 48 feet from the inner ring are some remains of a second wall, which was probably about 250 feet across. When this wall was demolished quern stones and iron axes were found built up in it. Similar discoveries were also made in the neighbouring fort of Caherbiel on its demolition. *Description*—Sir W. Wilde, "Lough Corrib," pp. 230, 238. Illustration.

91. *Cashel of Moyne, Mayo* (O. S. 123).—There seems reason to believe with Mr. H. T. Knox (from whose notes this section is derived) that the Cashel is of much earlier date than the foundation of the church. It is an oval ring-wall, 380 feet east and west, and 330 north and south. The wall is 8 feet thick, and high, the outer face being of much larger masonry than the inner, but more dilapidated. The church has two pillar-stones near its western end, and opposite the present gateway in the Cashel wall. Coffins are always carried between them, and they probably represent the gateway of an ancient enclosure: there are several foundations of dividing walls apparent in the garth. It lies not far to the north of Headford.

92. *Kilcashel Caher, Mayo* (O. S. No. 73).—This fine ring-wall is locally named Coolcashel or Coolcastle. It is nearly circular in plan, and measures 100 feet internally; the top is sodded and covered with heath. The masonry is largest to the north-east, and where this ends there is a patch of small stone-work as if a breach had been repaired. The rampart is 13 feet wide at the base, and 12 feet at the top, much of it being 9 feet high. It is built in two sections, the outer 7 feet wide, the inner 5 feet. The latter forms a sort of terrace, being slightly lower than the outer section. There is a high plinth round the foot of the wall.

The gateway is well preserved;† the jambs slightly incline, and the lintel rests on corbels. It is 4 feet 9 inches wide, the passage narrowing to 4 feet in the centre of the wall. The inner angles are rounded, and near the right-hand jamb a flight of small steps leads up to the wall.

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* See section 49, *supra*. Figure 19.

† Plate LV.

Opposite the entrance, at the west side, is a small offset, and two small opes 18 feet 9 inches apart, and measuring 2 feet 8 inches wide and 1 foot 8 inches high. It is said that they lead to a passage "nearly high enough for a man to stand upright in it." This passage extends from the southern to a few feet past the northern one. In the south-west side of the garth are two ruined souterrains, and there are traces of other enclosures, but not of circular huts.*

93. *Cahergel, Galway* (O. S. No. 55).—This fort lies in Killursa parish, two miles from Lough Corrib. It is a circular ring-wall of large masonry, and 117 feet internal and 137 feet external diameter. The wall is from 7 feet 7 inches to 9 feet 4 inches thick, and was from 16 to 20 feet high when Dr. O'Donovan visited the place, but is now reduced to half that height for the fort was used for a quarry to supply building material for the Headford Barrack. There are steps of large blocks projecting from the face of the wall like those of a modern stile. The gateway faced the south-east, and is 7 feet 6 inches wide, with jamb-stones 5 feet 8 inches high, 5 feet wide, and 21 inches thick. *Descriptions*—Sir W. Wilde, "Lough Corrib," p. 95; Lord Dunraven, "Ancient Architecture," i., p. 15.

94. *Dun Conor, Inishere, County Galway* (O. S. No. 119).—This fort is called the "Down of Conquovar" by Roderick O'Flaherty. It occupies a commanding position overlooking all the island, and visible from the mainland of Galway and Clare. The supposed founder of the fort is called Concraid in the poem of Mac Liag. "Concraid obtained his just portion at the sea on Inismaan."† The ruin was called Dooncraggadoo when Petrie visited Aran.‡ It measures 227 feet north and south, and 115 east and west internally, being a long oval fortification on the edge of a low ridge 20 feet high above a valley. The wall is in three sections, 18 feet 7 inches thick and 20 feet high, with little, if any, batter, and with several upright joints. The gateway was 2 feet 5 inches to 3 feet 6 inches, widening inwards; it is defaced, and lies to the east; a terrace ran round the wall, and, before the unfortunate "restoration" of the fort, presented a terrace and several flights of steps. The north flight was steep and ran straight up the platform, and thence turned to the right up to the top of the rampart. Another flight lay near to and to the right of the gateway; there were others to the west and south, and some lesser ones, but the present interior is greatly altered, and portions rebuilt where, in 1878, it had fallen to such a degree as to afford no authority for the modern steps and upper work of the restoration. A curious group of huts at the southern end has been partly rebuilt, but on the old foundations. A crescent enclosure adjoins the central caher, looping into its wall to the north-west and south-west, and being about 100 feet out from it at its farthest point to the south-east. Another bastion of unusual plan projects from the second wall at about 50 feet from the main gate of the inner fort; it measures 51 feet by 73 feet, and has external and internal gateways, now defaced; it is 15 feet high. *Description*—Lord Dunraven, "Notes," vol. i., p. 6, with plan and illustrations, Journal R.S.A.I., vol. xxv. (1895), p. 267. See Plate LIV. Figs. 13 and 23.

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* This description and the illustration (Plate LV.) are kindly given by Mr. H. T. Knox.

† Ossianic Society, v., p. 287.

‡ "Military Architecture of Ireland," MSS. R.I.A., p. 145. In the repairs on the fort, a doubled-up skeleton was discovered in it.

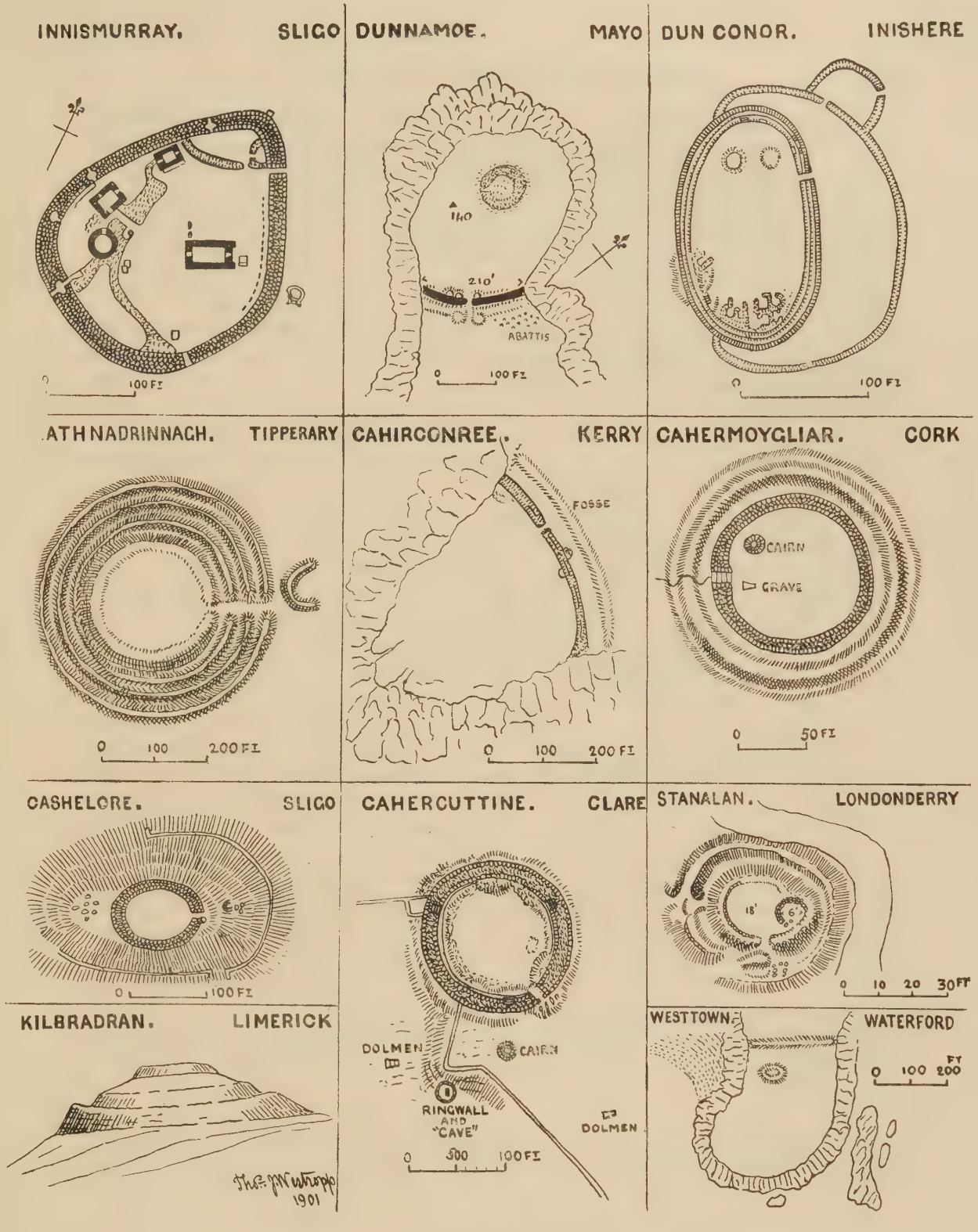

FIG. 23.—TYPICAL IRISH FORTS.

95. *Caheradrine, Galway* (O. S. No. 95).—A large caher on the roadside north of Clarinbridge. It is an unusually massive ring of masonry over 500 feet across, and about 1850 feet round. The walls are 6 to 8 feet thick, and for the most part 7 feet high in the faces away from the road. The blocks of the facing measure, as a rule, 3 feet by 2 feet to 6 feet by 2 feet, there is a very doubtful example of an upright joint. The gate faces the south, and is 7 feet wide, with side-blocks 6 feet wide and 5 feet 3 inches high; the lintels are gone. There is smaller stonework about 6 feet to the east of the gateway.

In the centre of the garth is a mortar-built featureless wall from which radiate a series of field walls, the fort being used for meadowing. The fort is said to derive its name from the O'Drinans, whose duty it was to "distribute justice to the tribes"* of Hy Fiachra Aidne. Their official residence was in later times at Ardnagree near Kinvarra. The name as given by local writers is Caherdrineen. See Plate LVI.

96. *Cahercommaun, Clare* (O. S. No. 10).—This fort is not named, though it is roughly indicated on the 1839 maps. Lord Dunraven describes it, but did not find its name, which is known to the neighbouring peasantry over middle age, and is found in leases and grants of the sixteenth and seventeenth centuries, and Petty's Survey. It is a massive caher of very rude masonry, 130 feet to 157 feet over all; the wall 14 feet high and 21 feet thick on the edge of a high cliff over the Glencurraun valley; there are traces of a terrace and one flight of steps to the south-west, and of a gateway or rock-cut drain 3 feet wide on the cliff edge. A wall of good masonry (much demolished in early times, and huts built upon and against it) is equidistant from the central caher, outside is a more irregular wall, 320 feet by 245 feet across. It is built in sections of masonry similar to the main fort, 4 feet thick and 8 feet high, forming, like the second wall, a half-moon and abutting on the cliff. In the outer enclosure are two radiating walls with huts at the end, several hut-sites and a sunken passage, not leading to a gateway but abutting on the solid outer wall. *Descriptions*—Lord Dunraven "Notes," vol. i., p. 18: no dimensions or plan, only called a "fort between Clifden and Termon," T. J. Westropp, Journal R.S.A.I., vol. xxvi., p. 153, with plan and illustrations; Proceedings R.I.A., vol. vi., ser. iii., p. 430.

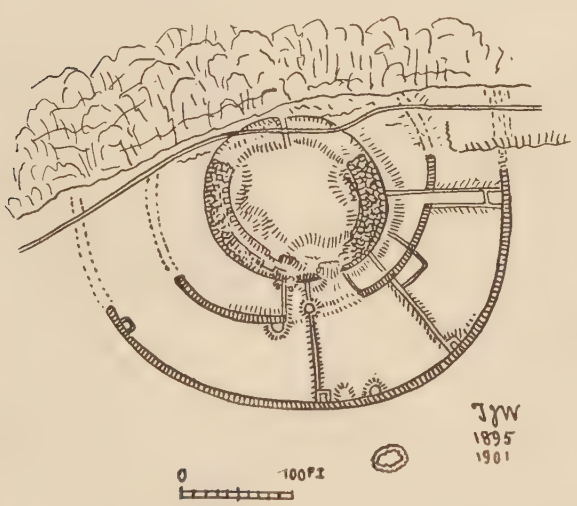

Fig. 24.—Cahercommaun, Clare.

* Thus a fort in Clare is called Cahermaclanchy from the family of Mac Flanchada, a race of Brehons.

97. *Cashlaun Gar, Clare* (O. S. No. 10).—Occupies the summit of a lofty isolated rock, rising from the Glencurraun Valley. It is rudely oval, about 160 feet north and south, and 105 feet east and west, with salient angles clinging to the projections of the cliff. The gateway was probably corbelled ; it opens upon a ledge 10 feet high, and must have been reached by a ladder. The wall is 10 feet thick and 13½ feet high, with upright joints. There are four hut sites. *Descriptions*—Journal R.S.A.I., xxvi., p. 152. Plan and Illustrations. Proc. R.I.A., vol. vi., ser. iii.

98. *Ballykinvarga, Caher, Clare* (O. S. No. 9).—Caherloughlin, in the Book of Distribution, 1655, perhaps the Cathair Fhionnabhrach of the Book of Rights.* It lies on a gently rising ground near Kilfenora, and consists of a strong wall, 135 feet by 155 feet across the garth, built with two terraces, and 14 feet thick and over 15 feet high, with batter and upright joints, enclosing a garth with huts and enclosures.† The gateway to the south, with side-posts and a lintel 7 feet long. A sunken way leads through an abattis of sharp stone pillars, from 50 to 100 feet wide, with an edge of low earthwork and large slabs, one 7 feet high. A spring wells out of the slabs not far from the entrance. *Description*—T. J. Westropp, Journal R.S.A.I., xxvii. (1897), p. 121, with plans and views ; Proc. R.I.A., vol. vi., ser. iii., p. 429.

99. *Cahercrovdearg, Kerry* (O. S. No. 68).—A large ring-wall 110 feet in diameter; the rampart is massive, but much ruined, 8 feet to 10 feet 6 inches thick, and in places 12 feet high outside and 6 feet inside. It was used as a place of worship in later times. There is a rude altar with three stones forming a cross, to the east end. A pattern was held on May 1st; the nameless patroness was said to be sometimes visible bleaching clothes at the holy well. The well lies to the west side, and seems to have been an underground passage, now filled with water; cattle were driven into the fort to drink as a precaution against contagious diseases. The stations are marked by small stones scribed with crosses.

100. *Cahergel, Ballycarbery, Kerry.*—(Not on O. S. map). A remarkable stone fort, 86 feet internally, having X arrangements of flights of steps, seven in number, leading to a terrace 2 feet wide, above which the wall rises for a few feet. The wall is 12 feet thick at the top and 13 feet below, 13 feet high outside, and 11 feet inside, the wall having a batter of 1 in 13. In the garth, which is 104 feet in diameter, is a broken-topped cloghaun 32 feet in internal diameter, the walls 8 feet high and thick. The gateway had imposts and lintels, one 8 feet long, and faced south-east, but it has collapsed with much of the adjacent wall, and the steps are now much injured. *Descriptions*—Lady Chatterton, "Rambles in the South of Ireland"; G. Wilkinson, "Practical Geology and Ancient Architecture of Ireland" (1848), p. 57; R. R. Brash, "Ecclesiastical Architecture of Ireland" (1875); Lord Dunraven, "Notes on Irish Architecture," vol. i., p. 24. Views and sections.

101. *Cahercullaun "Boen," Kerry* (O. S. No. 43).—This is a strong circular caher, enclosing a clochaun and standing at the corner of a large rectangular enclosure of dry-stone walls. The walls of the caher are 9 feet thick, 12 feet high, and show traces of steps leading to the top,

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* "Book of Rights" (Ed. J. O'Donovan), pp. 87–89.

† Plate LVII. Plan in section 51, *supra.* The references in plan are—A, Huts; B, Terraces; C, Gate; D, Sunken way; E, Monolith; F, Spring.

and have a marked external batter. Much was pulled down by a farmer in 1798. Perforated door-posts lay in the defaced gateway, and in the garth which measures 70 feet in diameter are the horseshoe-shaped foundations of a clochaun. The oblong area measures 78 paces from east to west and 45 from north to south; its walls are only 3 feet 6 inches thick and 10 feet high; on the east side were some remains of a strong peel tower. *Description*—Lady Chatterton, "Rambles in the south of Ireland," vol. i., p. 184.

102. *Fahan, Kerry* (O. S. No. 52).—This most important group of forts receives notice in other parts of this paper. Doonbeg in section 50; Caherconor (DuNoyer's "Fort of the Wolves") in fig. 21, *supra*; and Doonmore in section 125. The other important forts, both of earth and stone, have been fully described by DuNoyer and Mr. R. Macalister in the accounts so often cited above.

103. *Staigue "Pound," Kerry* (O. S. No. 99).—This fort is too well-known to need more than a brief notice.* It is 89 feet in internal diameter, the walls 18 feet high, and from 13 feet to 11 feet thick, with an external batter and upright joints. Inside is a remarkable arrangement of steps crossing each other in ten bays of X design, with platforms at the intersections. There are two chambers in the wall, and it once possessed a cornice of large blocks. The gateway is entire with built sides and a reveal in the passage; it faces the south, and is 6 feet 2 inches high, tapering from 5 feet 2 inches to 4 feet 3 inches. The wall is girt by a shallow fosse. *Descriptions*—General C. Vallancey, "Account of the ancient stone Amphitheatre (1787)"; F. C. Bland, Transactions, R.I.A. (1821), vol. xiv., p. 17, an admirable paper with plan and sections; and Lord Dunraven, "Notes." vol. i. p. 24, with fine photographs. See Plate LVIII., section 49.

104. *Cahermoygilliar* ("Cathair Maigh Liadh Gliar"), *Cork* (O. S. No. 94).—Two miles from Kinneigh in the townland of Cahir.† A circular earthwork with stone facings like the southern Caherdorgan in Kerry. The outer facing is now 4 feet high; the fort measures 90 feet internal and 120 feet external diameter. The rampart is 8 feet high, and about 12 feet thick; the inner face low and destroyed. It has a remarkable gateway 25 feet 4 inches long with a covering of seven slabs, the outer impost being placed on edge. This passage is 7 feet 3 inches to 6 feet high. In the garth are a partially explored souterrain lying to the south-east, and near it a cairn, or perhaps fallen Cloghan, 8 feet high and 70 feet round. It is surrounded by two fosses and rings, the inner fosse 9 feet, and the outer 12 feet wide. It was first explored in 1856, and described by John Windele, who, most unfortunately for Irish field survey, did not publish his notes.

105. *Keel Aodh, Cork* (O. S. No. 30).—In Drominagh, near Belathanire on the Ballyhooly road, half a mile north-east from Ballinabortagh, where is a square fort with a dallan and a defaced dolmen. It was explored by Windele, 1841. The fort is circular and much defaced. The rampart 8 feet high outside, and 3 feet to 6 feet high inside. Within it is an oblong, nearly rectangular, enclosure, 86 feet north and south, and 80 feet east and

* "Our Ancient Monuments" (C. P. Kains Jackson), p. 89, is inclined to attribute Staigue to a date a little later than A.D. 1000.

† Figure 23.

west, much broken. Near the north-west angle is a cairn of rude stones covered with a coating of quartz blocks, and only 3 feet high, 18 feet north and south, and 12 feet east and west; in the south east angle is a grave, oval or boat shaped, formed of stones set on edge. It probably represents a residential fort utilised as a burial-place in early times.

106. *Lissrahiermid* (Lios ratha Diarmuid), *Cork* (O. S. Nos. 25 and 26), near Ballygarrane (Fermoy).—An earthwork 90 feet in diameter, with a fosse and ring. The ring 4 feet, and the fort 18 feet, above the field; the fosse, 5 feet below. It has a souterrain built of rough stones and covered by flags 4 feet across.

107. *Cashel, Knockdrum, Cork* (O. S. No. 142).—A stone fort 300 feet in circumference on a bold hill. The wall 5 or 6 feet high, and 10 feet or 11 feet thick. Near the gateway are a recess in the wall and a pillar with a rude cross. The foundations of a clochaun, 18 feet long and with a rounded end, lies in the garth; also several souterrains 6 feet to 12 feet long and 3 feet high. *Description*—Canon J. Brougham, Cork Historical and Archæological Society, vol. ii., p. 154.

108. *Kilbradran Rath, Limerick* (O. S. No. 19).—An earthwork on a hill to the south-east of Foynes, near Old Abbey. The vallum is 8 feet high outside, and 2 feet high inside, and consists of two rings, the inner about 150 feet across, the outer 56 feet distant from the inner. It has an entrance gap to the south, and a shallow fosse. See fig. 23.

Marsh and Lake Forts.—The walled islands, as we pointed out, are constantly alluded to in the voyage of Maelduin. In most cases they are like the weaker cahers, and seldom possess structural features of interest. We may dismiss the principal of them with a few brief notes :*—

109. *Dungorkin, Londonderry* (O. S. No. 23).—This fort is in low marshy land, and possibly occupied an island in a shallow lake. It has an oval mound, 186 feet by 129 feet, and inside it is a circle, 45 feet in diameter; outside the whole is a large elliptical fosse, 84 feet wide. A causeway of piles, with transverse beams over them, and cross beams, above the upper timbers lead to it across the marsh. *Description*—"Statistical Survey of County Down," p. 499.

110. *Lough Nacrannagh, Antrim* (O. S. No. 26).—In the lake on the plateau above Fair Head. A well-built oval fort, 6 feet by 4 feet high, the garth paved and measuring 126 feet by 80 feet. It has a landing-place 6 feet wide to the north-east, and steps to south and east. *Description*—A. M'Henry, Proc. R.I.A., vol. ii., ser. ii., p. 462; "Ulster Journal of Archæology," vol. VIII., p. 238.

111. *Innis Mac Creawa*, or *Illaun Carbery, Galway* (O. S. No. 55).—An island in Lough Corrib. It has a circular caher of small dry-stone masonry; the wall, 6 feet thick and

* To mention a few others:—A lake fort remains at Lough na Crannoge, Tyrone; a marsh fort, with strong earthwork and fosse, in Attyflin, Limerick, near the railway; Caherkinallia, Clare, a stone fort in a knoll in a marshy hollow, &c. The Annals of Ulster record the building of one, Oilen Daingen, in A.D. 703, and its destruction three years later.

10 feet 6 inches high, and about 140 feet across, occupying most of the island. A slight fosse appears round the wall, save at the entrance gateway, where is a level crossing. *Description* and illustration—Sir W. Wilde, "Lough Corrib," &c. (1867), p. 89.

112. *Lough Skannive, Galway* (O. S. No. 77), near Carna.—The fort* is locally called "the Castle." The islet is overgrown and girt, save at some abrupt rocks, by an irregular wall, with regular facing and filling, 3 or 4 feet thick, and enclosing a space, 70 feet by 50 feet, and about 220 feet round. There is a small dock for boats on the side farthest from the shore; the wall has a slight batter. There is another walled island in the same, and a third in Lough Bola, not far away. *Descriptions*—"Lough Skannive," General Edgar Layard, Journal R.S.A.I., vol. xxvii., p. 273; "Lough Bola," Mr. George Kinahan, *Ibid.* (1872–3), p. 11. Illustrations in both.

113. *Cahersavaun, Clare* (O. S. No. 10).—A strong caher, with large masonry, the features defaced, on a rocky knoll in the temporary Lake of Castletown. There seem to be remains of a curved causeway leading to the shore. *Description* and illustration—R.S.A.I., vol. xxvi., p. 364.

114. *Loughadoon, Donegal* (O. S. No. 64.)—An oval fort on an island, giving its name to Loughadoon, two miles from Portnoo; it measures 118 feet by 87 feet internally. The wall varies from 14 feet to 10½ feet thick, and is very well built of dry-stone work. One gateway remains, and a fight of steps at each end of the oval going to the top of the wall; traces of a passage remain inside the wall. *Description*—Very Rev. Archdeacon Baillie, Journal R.S.A.I., vol. xxx., p. 148.

115. **Rectilinear Forts.**—As already noted, the square fort, whether of earth or stone, differs in no structural particular from the ring wall or rath. As regards age, antiquities of the Bronze Age have been found in a few; but the popular idea that the straight-walled fort is later than the curvilinear has probability on its side, at least in many Irish cases. These forts in Ireland have also an important bearing on the archæology of Great Britain and the Continent, as showing that a straight-walled early fort is not necessarily Roman.† They occur, we believe, in every Irish county; but are most common in Leinster, especially Wexford with over fifty, and Kilkenny with at least twenty-eight, as shown on the map. They occur, with surrounding ring-walls, in Galway, Cork, and Clare counties. There is a fine example near Tuam, with lofty stone walls forming a rectangular central enclosure, and a second wall circular in

* Plate LVI.

† The question is outside this essay, and the instances given by George Chalmers ("Caledonia," i., p. 92) and others of square and ring forts occurring together in Scotland and Wales, being a Celtic fort with a Roman camp holding the natives in check, lose much weight from the Irish instances.

plan; and another, with a small central ring-wall and large straight-walled outer enclosure, lies on the ridge of Cahermackirilla, in Clare. It is at present impossible to state, even approximately, their total number. Of course it is more than probable that many are omitted on the maps; and, without a personal visit, one cannot be sure that the circular forts shown on the older Ordnance Survey maps are not, in some cases, rectilinear, while, on the new maps, many rectilinear forts are not distinguished from late enclosures. The earthworks of this plan are of very little interest; so we will only illustrate this section by a few of the more striking examples of rectilinear-walled stone forts:—

116. *Caherribert, Galway* (not on O. S. 120).—It is a straight-sided fort, with dry-stone walls, 6 feet high and 2½ feet thick. In the western side is a gate, with sloping jambs and lintels, 4 feet 10 inches high, and 3 feet 2 inches to 2 feet 10 inches wide. Wilde considers it much later than the neighbouring ring-walls. *Description*—Sir W. Wilde, "Lough Corrib," p. 244.

117. *Knockaun Fort, Clare* (O. S. No. 10).—In the townland of Tullycommaun, not far from the dolmen on its northern ridge, is a straight-walled stone fort, now greatly levelled. It is of irregular "diamond shaped" plan, but is shown on the old Ordnance maps as a circular fort. It is of fair masonry, and in its garth lies a very curious slab enclosure, formed of large blocks of limestone set on edge. There were two flat stones, probably for seats, one on either side of the door, which was towards the south; while a souterrain under a block long led under the side slabs into the enclosure from the north. The garth measures about 150 feet across.

118. *Earlsrath, Kilkenny* (not on O. S. 36 and 40).—This fort lies near Kilbeacon and is oblong. It measures 210 feet by 165 feet and has a fosse and earth bank 20 feet high, once faced with dry stone work now almost removed. *Description.*—W. Tighe, "Statistical Survey of Kilkenny," p. 629.

119. *Mullymeskar, Fermanagh* (O. S. No. 27).—As shown on the map, this earthwork is X-shaped in plan; and, if this is correct, it is a very exceptional structure, and should be carefully planned and described. It lies near the "Ring Hill," to the east of Enniskillen.

120. **Promontory Forts.**—The second most important type is the cliff fort or, perhaps, as a better term, the "promontory fort," for (unlike such forts as Doon Aenghus) it depends for most of its defence on natural cliffs or steep slopes, whether of a promontory or inland spur.* So well chosen were these ancient strongholds that (as shall be seen in many cases) castles were built and ramparts raised across the neck upon or within the old fosses

* Cæsar mentions a fortress of the Aduatici, formed by constructing two walls and a fosse, 200 feet long, across the neck of a long precipitous ridge ("De Bello Gallico," Lib. II., c. XXIX.).

and earthworks. In some cases the name Doon attaches to a bold headland on which no trace of fosse or mound is now visible; but the ease with which a stone wall was removed or a ditch entirely filled with the mound is so evident that we may be allowed (noting the fact) to enumerate such suitable places as still bear the name "doon." As Mr. R. A. S. Macalister points out, "doon" is the usual term for a promontory fort; but here and there "caher" appears, and stone walls are not unknown. Dunbeg, near Fahan, and "Balor's Prison," have at least four earthworks.

Commencing at *County Dublin*, and going southward round the coast, we find a cliff fort at Lambay Island called the "Garden Fort" (a curved earth-work across Gouge Point), Dun Criffan, at the great Bailey, on Howth; where a natural valley narrowed the neck, and a fosse and earthwork were thrown across. It is greatly defaced, but some traces remain, and a midden of periwinkle and limpet shells is visible on the north side; no water-supply is apparent.* Baginbun, in *Wexford*, has earthworks, attributed to Strongbow, but probably ancient. *In Waterford* we find an interesting group. The fort of Shanooan, above Doonmore Harbour (O. S. No. 27); Swine Head Fort, at Stonycove (No. 27); Coolum Fort (No. 27), near Brownstown Head at Tramore Bay. The "encampment" at West town, Illaunacollia Fort, in Garrarus, and Islandikane, or Sheep Island, with an ancient dwelling, lie along the cliffs (No. 26); Woodstown, near Green Island Fort, Dunbrattin Headland (No. 25), and Ballynarrid Fort lie farther westward. *In Cork* we find a Knockadoon point, west of Youghal Bay (No. 78); the Big and Little Doon, near Kinsale (No. 125); Dooneen Point (No. 127); the Old Head of Kinsale, with its Castle, and the earthworks of Duncearnmna, which the Triads reckon as one of the three oldest forts in Ireland, and Dooneen Head (No. 127); Dunmanus Head (No. 138); Dunworly Castle, at the Seven Heads (No. 145); Dunlough, or Three Castle Head and Castles (No. 146); Dunowen Castle (No. 144); Dunnycove Castle, Dundeady Castle, and Dunoure Castle, all on Galley Head (No. 144); Coosdergadoona and Dooneendermot Fort, at Toe Head (No. 151); Doonlea (No. 147); Dooneen (No. 138); Doonbeg, on Beare Island (No. 128). *In Kerry*—Doonave cliff, near a headland, with gallans across the neck (No. 78); Reenacaheragh Castle and Fort, on Doon Point (No. 87); Dunbeg and Dunmore, within one earthwork, in Doonsheane (No. 53); Doonywealaun Fort, Doon Fort, south of Dingle Bay, enclosing a "giant's grave" (No. 53); Dunbeg Fort, the well-known stone fort and fosses near Fahan, and Doonmore (enclosing an Ogham pillar), near Slea Head (No. 52); Doon Fort, with Ferriter's Castle (No. 42); Cahercarbery more and beg Forts (No. 13); Doon Point and Castle, near Ballybunion (No. 4). *In Clare*—Dunmore, an unusual type described below (No. 71); Doondoillroe, curved earthworks and deep fosse (No. 65); Dunlicka Castle and Fort (No. 55); Illaunadoon, a detached but not isolated crag (No. 55); Doonaunroe Fort, Foohagh Point (No. 56); Donegal Point (No. 46); Moher Fort (No. 14). *In Galway*—Dubh Cathair, Aran

* It is named in the Chronicon Scotorum, A.D. 647. In the subsequent names we follow the local usage in spelling—the pronunciation is always "Doon."

(No. 119). *In Mayo*—a supposed walled headland on Caher Island (No. 94);* Doonty and Gubadoon, in Achill (No. 54); Doonaneanir isolated rock and Dunnamoe stone Fort, Spinkadoon stone Fort, and Dun Fiachra earthen Fort, all in the Mullet (Nos. 2 and 9); Doonvinalla Fort, Portnacloy (No. 1); Doonbristy, detached rock. *In Donegal*—Dunbalor Fort, with Balor's Prison, Portadown, on Tory Island (No. 6); Duncap (No. 16); Dooan, or Green Fort, Dunree headland with modern battery, and Dunaff Head, in Lough Swilly; Dunaldragh (No. 1); Dunargus, Dungolgan Head (No. 2); Dunmore Head (No. 5). *In Antrim*—Cliff forts rather than promontory forts may have been on the sites occupied by the late castles of Dunluce, Dunseverick, Dunneney, and Kenbane (Nos. 2, 3, 4); Dunseverick shares with Duncearnmna the repute of being one of the oldest forts in Ireland. Carravindoon or Doon Point, on Rathlin Island (No. 1), Dunsoghey (No. 4). In all over seventy probable sites, at least thirty-four having actual remains.

We may describe a few typical examples.

121. *Dunfiachra, Mayo* (O. S. No. 2).—At Aghadoon, at the N.W. corner of Mayo, a cliff fort overhangs the sea. It consists of a strong earth mound with a fosse across the neck of a precipitous and even overhanging promontory. The founder is said to have possessed a famous sea-horse on which he was able to leap across the narrow part of the creek. At a short distance to the north are two more long and bold headlands, the northern of which is named *Spinkadoon*, and was defended by a massive dry-stone rampart now nearly levelled to its foundation.

122. *Dunnamoe,*† *County Mayo* (O. S. No. 9).—A promontory to the N.W. of Belmullet is defended by a massive but rudely-built stone wall, 210 feet long, 18 feet high, 8 feet thick, and much injured. The defaced gateway is in the centre facing the S.E. It was 3 feet 8 inches wide, and had a fenced passage leading across a shallow fosse 14 feet wide. To each side of this fosse the Ordnance Survey maps showed a hut-site, but these structures have been entirely removed. Before the fosse to the right hand a number of small stones are set in the ground, forming a very slight abattis. Inside the wall are three dilapidated huts about 9 feet by 4 feet 6 inches, and 4 feet 6 inches high, the roofs having collapsed. On the headland inside the wall and fosse, was a strong circular fort 101 feet in diameter, the gateway to the S.W., all being much defaced and now indeed only resembles a circular patch of tumbled blocks. *Description*—W. F. Wakeman, Journal, R.S.A.I., vol. xix. (1889), p. 182, plan and illustration. Dr. C. Browne, "Ethnography of the Mullet, &c.," Proc. R.I.A., vol. iii., ser. iii., p. 640. See plan herewith. Figure 23.

123. *Dubh Cathair,* or *Doonaghard, Aranmore, County Galway* (O. S. No. 119).—Now called "Doon doo 'hair," and consists of a strong dry-stone wall built across a long headland and

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* See paper by Mr. Rolleston, Journal, R.S.A.I., vol. xxx., p. 358. There are two islets, Doonallia and Doontraneen, at the cliffs of Clare Island, which may represent sea-wrecked promontories and forts.

† O'Donovan renders its name Dun modha after the Firbolg chieftain Mod of the sons of Huamore.

220 feet long, 20 feet high, and 16 to 18 feet thick. It was protected on the land side by an abattis. Inside were two rows of stone huts, one along the wall; another for 170 feet along the cliff. These are now nearly swept away. In 1878 the inner face of the wall was destroyed, but when the fort was restored as a national monument, modern terraces and steps were introduced. The gateway was extant near the northern end when Petrie saw it. Several hut-sites and a midden lie before the wall on the outside, and a somewhat similar but nearly levelled fort lies to the N.W. *Descriptions*—Lord Dunraven, Notes, vol. i., p. 9, with plan and photographs; T. J. Westropp, Journal, R.S.A.I., xxv. (1895), p. 266. See Plate LIV.

124. *Dunmore, Clare* (O. S. No. 71).—A very remarkable cliff fort on a peninsula joined to the land by a long bank of drift artificially scarped. The upturned strata of the landward cliff formed the base of a dry-stone wall backed with an earthen mound. There are middens of limpet shells and polished pebbles. *Description*—T. J. Westropp, Proc. R.I.A., vol. vi., series iii., p. 446, plan and section.

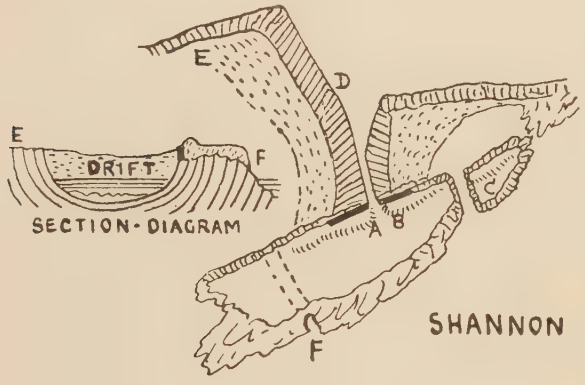

Fig. 25.—Dunmore promontory fort, Clare.

AB.—Middens and earthwork. D.—Raised pathway.
C.—Earthwork on detached rock. EF.—Section.

125. *Dunmore, Kerry* (O. S. No. 52).—Near Slea Head, the largest promontory fort in Ireland. It is fenced by a fosse and two mounds 1570 feet long, and nearly straight, running N.N.W. and S.S.E. across the headland. The outer mound is only 2 feet 6 inches high, the fosse is 11 feet 6 inches wide, and the inner bank 5 feet high. A souterrain with a cross scribed on a stone, and containing bones, was found on the headland, and it also contains the "Dovinia" ogam-scribed pillar-stone. *Description*—R. A. S. Macalister, Trans. R.I.A., vol. xxxi., p. 279.

126. *Dunbeg, County Kerry* (O. S. No. 52).—This noteworthy fortification,* though not one of the largest, is certainly the most remarkable of our promontory forts. It runs across the neck of a triangular headland. Four fosses and as many earthworks crossed the neck. The first two are now much curtailed to the east. A raised gangway crosses the others, leading to a gateway in a strong rampart of dry stone. There are slabs in each bank as if there had been stone gateways, and a souterrain runs under the main entrance and for some distance under the gangway. The main wall is of two sections. The older part is 139 feet 6 inches long, and from 8 feet to 11 feet thick. On the inner face are low terraces or steps, and outside a section, 1 foot 6 inches lower, has been built along the landward face and resting on a plinth. Portions of this work have fallen.

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* Figures 13, 21. Reference letters on latter: *a* steps, *b* guard room, *c* paved way *d* souterrain, *e* clochaun, *f* drain, *g* mounds, *h* gateways, *l* kerbing, *m* modern walls.

The remarkable gateway and passage, side chambers, recesses, and loop-holes are described among the fort gateways, *supra*, section 50. We need only note that a clochaun with a surrounding drain, the site of another hut, and traces of a wall round the edges of the cliff are found in the enclosure. It has suffered, like Grianan Aileach and the Aran forts, from too complete restoration when conserved as a national monument, and now differs greatly from the fort seen and described by Windele in 1848, and described and planned by DuNoyer ten years later. *Descriptions*—George DuNoyer, 1858, Archæological Journal, vol. xv., p. 1. Lord Dunraven, "Notes," vol. i., p. 19. R. A. S. Macalister, Trans. R.I.A., vol. xxxi., p. 220. All have plans and illustrations; those of the latter elaborate and careful, the other plans very inaccurate.

127. *Caherconree, County Kerry* (O. S. Nos. 37 and 46) (locally "Boen Cahirach.")—A projecting spur fenced by high cliffs (nearly 200 feet high) on two sides S. and N.E., fenced on the third side by a wall of moderate-sized stones 350 feet long, straight along the centre,* but curving inwards at the ends, 14 feet to 15 feet 9 inches thick, 10 feet 6 inches high, with two terraces inside, 3 feet 3 inches and 3 feet wide. The faces are of headers, and the wall is in one piece and has no batter. There are some equivocal traces of huts against the wall. The entrance passage was 7 feet 6 inches wide. Outside is a low earthwork. *Descriptions*—John Windele, Ulster Journal of Archæology, VIII. (1860). P. J. Lynch, Journal, R.S.A.I., XXIX., p. 5, plans, sections, and illustrations. Both are most careful and valuable descriptions.†

128. **Motes (Simple).**—There are two kinds of this type of structure; the simple mote, usually a conical earth mound 20 feet to 50 feet high, with a flat or rounded summit and with a fosse and earthwork round the base, the other a more complex kind, with a lower platform and girt with a fosse. The simpler form occurs in Central and Northern Europe and in Great Britain. In Ireland few examples exist west of the Shannon and Lagan or in Western Munster, though several ordinary raths are called locally motes. The simple mote is most abundant in county Kildare. It is very easy to confuse this form with tumuli, but the mistake is of the less moment that certain defensive motes contain burials, and certain sepulchral mounds have been evidently adapted for fortification, as at Durrow and Greenmount. The early mote has often been utilized as the base of a mediæval keep; in other instances the castle has been built

* Plate LIX. Figure 23.

† "Cahir Conri," by Rev. M. Horgan, Cork, 1860, attempts to show that the real fort named in the Cuchullin legend is Cathair Conri, near Lough Curraun, where, he states, that a similar legend prevails, and that the stream is named Fion glaisse. However, the traditional fort was located on Slieve Mish by a poem of Flan (*c.* A.D. 1086). Professor Rhys (R.S.A.I., vol. XX., 1891, p. 654), following O'Donovan, doubts the existence of the fort. See Plate LIX.

beside the mote in the lower enclosure. Early tradition attributes several of these forts to the opening centuries of our era. The mote of Magh Adhair, for example, to Adar son of Huamore; Downpatrick to the Red Branch hero Celchtar; Naas to Lughdech Eithlenn, *circa* A.D. 277; while Mainham is possibly the traditional tomb of Buan, wife of Mesgegra, who died of grief at seeing her husband's head carried by Connal Carnech. It is hard to deal with these mounds in any detail, so we will endeavour to collect a list of some of the principal motes in Ireland, as an attempt at more would be necessarily imperfect in the absence of field lists.

Antrim.—Donegore, 40 feet high (O. S. No. 50). Dromfane (O. S. No. 42). Dunamoy, 50 feet high, with flat top and 50 feet across.

Longford.—Granard (O. S. No. 10). The largest simple mote in Ireland. It has chambers and traces of the strong mortar-built walls of some late defence.* Ardowlan (O. S. No. 14) with one terrace.

Monaghan.—Clones (O. S. No. 11). It is nearly 70 feet up the slope, and has three ledges or terraces on the sides. The fosses had been filled up before the Ordnance Survey of 1835, when O'Donovan examined it.

Louth.—Louth (O. S. No. 11), a small mote. Dawson's mote near Ardee (O. S. No. 17). Faughart (O. S. No. 4), chiefly made of stones, and about 32 feet high. Mount Ash (O. S. No. 6). Mount Bagnal (O. S. No. 8), with one fosse and ring. Castlegard, 90 feet up the slope, 600 feet circumference. Rosskeagh has a small platform on the south flank, and is girt with fosses and a triple mound, one being of stone (O. S., No. 4).

Meath.—Slane (O. S. No 19), described below. Navan (O. S. No. 25), a small rounded mote, with a fosse and bank cut out of a low gravel hill, and now undermined. Nobber (O. S. No. 5). Dunsany (O. S. No. 37), very large; defaced by later buildings.

Westmeath.—Moate, a fine rounded mound† (O. S. No. 30). Rathcreevagh, near Brookmills, with high ring. Rahugh (O. S. No. 38), a large mote with fosse and bank, cut out of the escar. Ballylochloe, a rounded mote. Tinode (O. S. No. 2).

Dublin.—Dunsoghly (O. S. No. 14), near it two lesser motes. Ballymount (O. S. No. 21), defaced by later buildings.

King's County.—Durrow (O. S. No. 9), defaced by later castle.

Queen's County.—Mote Castle (O. S. No. 30). Killeshin (O. S. No. 32). Skirk (O. S. No. 21), noted below.

Kildare.—Clane (O. S., No. 14), a fine mote, with a fosse and ring, on the Liffey. Mainham (O. S. No. 14), a large flat-topped mound, with fosse and ring, the supposed tomb of

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* Wilkinson, "Practical Geology and Ancient Architecture of Ireland" (1845), p. 56.

† See "Irish Names of Places" (Dr. Joyce, vol. i., p. 281).

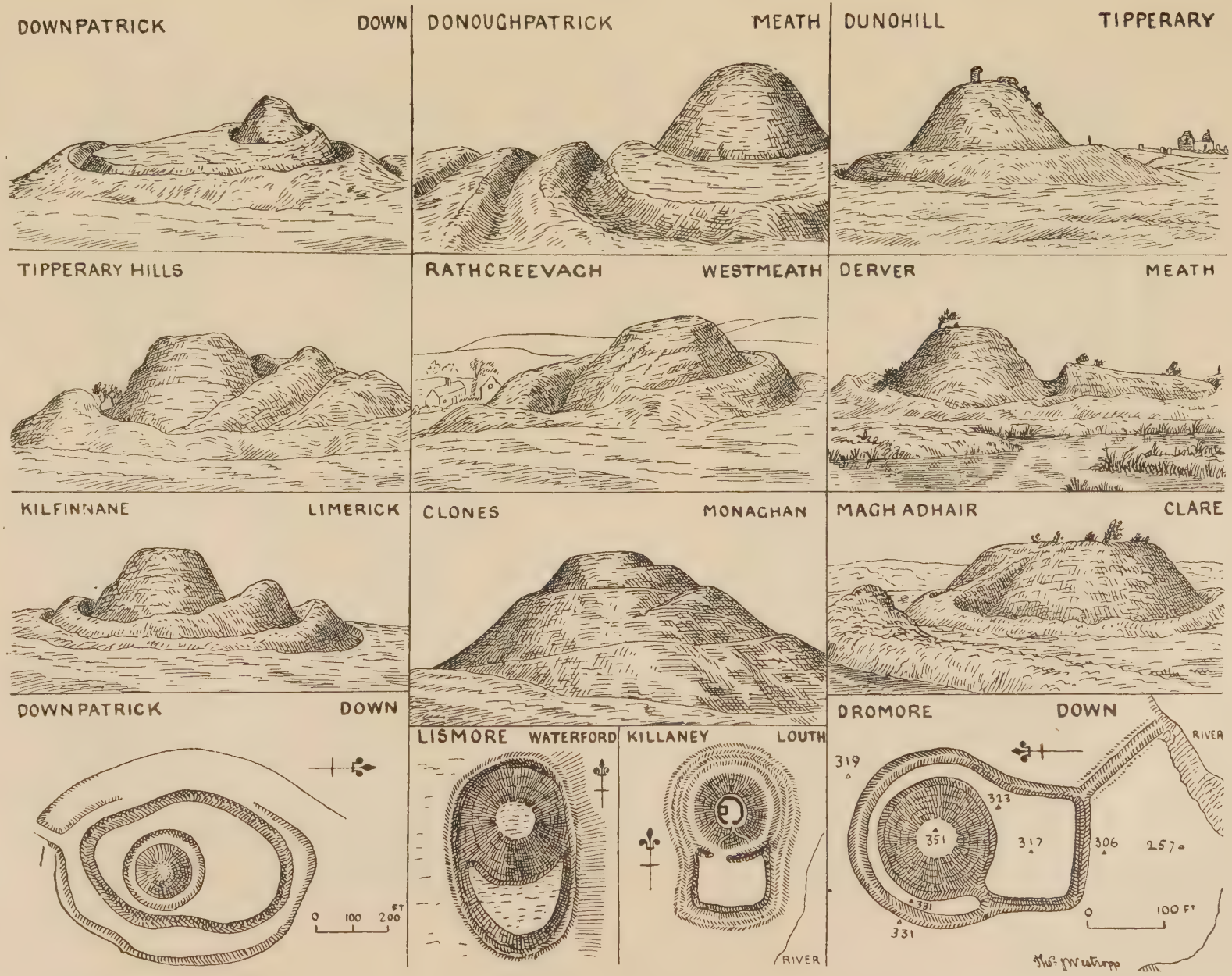

FIG. 26.— TYPICAL IRISH MOTES.

Buan.* Naas (O. S. No. 19), destroyed by Cormac Mac Airt. Great Dowdenstown (O. S. No. 24), 37 feet high, with a side terrace, fosse, and ring. Kilkea (O. S. No 37). Rheban (O. S. No. 30). Rathmore (O. S. No. 20), a true mote despite its name. Old Connell (O. S. No. 23), 38 feet high, with ring. The Curragh had many small motes or tumuli, of which Moteenanow is probably a true mote. Cloncurry, near the northern border, is probably sepulchral; it is 27 feet high without a fosse.

Carlow.—Ballyknockan (O. S. No. 16). Mill Mote (O. S. No. 7). Ballyhannon (O. S. No. 16). Castlemore (O. S. No. 8), it is 29 feet high. Castlegrace (O. S. No. 8), about the same height. Dun Riogh, Ballyknockan (O. S. No. 16), a large mote, 230 feet across at the base, and 69 feet up the side. St. Mullins (O. S. No. 26). Clonrusk (O. S. No. 14).

Wicklow.†—Parknasilloge (O. S. No. 7). Motamoy (O. S. No. 21). Umrygar (O. S. No. 42). Raheena (O. S. No. 21). Enniskerry (O. S. No. 7). Mount Kennedy (O. S. No. 13).

Kilkenny.—Listerlin (O. S. Nos. 36 and 40), described below. Knocktopher, (O. S. No. 31).

Wexford.—Pallis (O. S. No. 2), 100 feet diameter and 28 feet high. Ballymoatymore (O. S. No. 20), 25 feet diameter and 30 feet high.

Galway.—Newtown Eyre (O. S. No. 99).

Clare.—Magh Adhair (O. S., No. 34), described below.

We may briefly describe a few typical examples and noteworthy instances. The type does not lend itself to any elaborate description.

129. *Faughart, Louth.*—(O. S. No. 4). A lofty and shapely typical mote, 38 feet high, with a flat top. Wright makes it to be 60 feet high, probably measuring up the slope. It has a fosse and ring round the base, and a remarkable sloping ascent, as at Magh Adhair.‡

130. *Slane, Meath.*—(O. S. No. 19). A large flat-topped conical mote, 27 feet high, with a flat top, and slight rampart (hardly a foot high), 93 across, and 560 round the base. An excavation on top shows it consists mainly of splinters of stone out of the fosse. It has no sloping ascent to the summit and in parts slopes as much as 10 in 12. It is girded with a deep fosse cut in the rock 5 to 7 feet deep, and 16 to 18 feet wide. Concentric with this is another but slighter fosse, 4 feet deep with a nearly levelled ring; it measures over all 392 feet east and west. It is thickly planted, and stands in the field west of Slane "Abbey," on the summit of the Hill of Slane, 497 feet above the sea. If sepulchral it may be the Ferta Fir Feic which stood near Slane;§ it is stated to be the palace of King Slanius.

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* Co. Kildare Archæological Society, vol. iii., p. 317. Paper by Rev. M. Devitt.

† Motes on the border of Wicklow are said to be brehon's law mounds, and if a pillar stands near them, it is called Cloch na Righ, and believed to have been a place of inauguration.

‡ Sloping ascents of timber are figured above from Bayeux Tapestry, and are described in the Life of St. John, Bishop of Terouaine (Act: SS. Bolland, 27 Jan.); Clarke's "Mediæval Military Architecture in England," vol. i. p. 36.

§ "Life of St. Patrick," by Mactheni (ed. Rev. A. Barry), p. 19.

131. *Skirk, Queen's County.*—(O. S. No. 21). A mote and circle of upright stones surrounded by a rampart and fosse. Urns and human bones were found in the lower enclosure. *Description*—Sir Charles Coote, "Statistical Survey of Queen's County" in Vallancey's "Collectanea de rebus Hibernicis."

132. *Listerlin, Kilkenny.*—(O. S. Nos. 36 and 40 cover the townland, but show no mote). Tighe describes it as 40 feet high, with a flat oval top, 15 by 18 yards across, and 114 yards in circumference at the base. It is girt with a ditch 30 feet wide, except on the east side. *Description*—Statistical Survey of County Kilkenny, W. Tighe, p. 629.

133. *Magh Adhair, Clare.*—(O. S. No. 34). A flat-topped mote without battlements, but with a fosse, earth-ring, and sloping ascent to the west.* It stands in a natural depression once banked round and beside a stream. It measures 100 feet across the top, and 25 feet high. A cairn, 17 feet high, stands between it and the stream, and a large block of conglomerate with two basins lies in the enclosure. A pillar stands in the field beyond the rivulet, 140 feet from the mound. It is traditionally connected with Adar the Firbolg, and was the place of the inauguration of the Dalcassian princes from the earliest times to the reign of Elizabeth. *Description*—Proc. R.I.A., vol. v., series iii., p. 55.

134. **Motes (Complex).**—The second and more complex form of mote is of much greater interest than the last, consisting, as it does, of a lofty mound, round-headed or flat-topped, an annexe or lower platform, usually separated from the high mote by a fosse, and the whole girded with one or more fosses and banks. This form of mote occurs in Hungary and Germany in forms identical with those in Ireland and Britain. It will be remembered that it has been considered to be a form of temple, or to be the "castra ac spatia" of Tacitus. The annexe is most frequently crescent-shaped in plan, but is sometimes fan-shaped, square, or even round or oval. Like the simple mote it is most abundant in eastern Ulster and Leinster. It does not (so far as we are aware) occur in Connaught, Western Munster, in the Queen's or King's County, Dublin, Carlow, Monaghan, Armagh, Tyrone, Fermanagh, or Donegal; it is possible that some of these forts by the destruction of their annexe now appear as simple motes. It is most abundant in Down and Louth, and some of the finest examples are found there and in Meath. We collect the more important examples; most of them like the simple motes stand near streams.

Antrim.—Dundermot, crescent annexe to south (O. S. No. 27). Galgorm, square annexe to north-east (O. S. No. 37), Ballykeel, fan annexe to south-east (O. S. No. 37).

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* This is a rare example of the permanent sloping way.

Down.—Downpatrick, the most remarkable in Ireland, described below (O. S. No. 37). Dromore, square annexe, described below (O. S. No. 21). Crown Mound near Newry, square annexe, described below (O. S. Nos. 46, 47).

Londonderry.—Kilcranny, fan annexe (O. S. No. 3).

Tyrone.—Clogher (O. S. Nos. 58, 59), described below.

Longford.—Ardowlan (O. S. No. 14), crescent annexe.

Louth.— Castlegard, 90 feet up slope, 47 feet in diameter on top, Greenmount, described below (O. S. No. 15). Killaney, square annexe, described below (O. S. No. 10).

Meath.—Derver, a rounded mote, with a square annexe, on the bank of a stream (figure 25), (O. S. No. 10); Donaghpatrick, on the Boyne, a very fine mote, with crescent annexe to south-west, described below (O. S. No. 17); Lisboy, round annexe to west (O. S. No. 6).

Westmeath.—Castletown, 50 feet high, crescent annexe to north-west (O. S. No. 32); Fore, has a long oval enclosure to south-west (O. S. No. 4). Ardnurcher (O. S. No. 31), described in Trans. R.I.A., vol. ii.

Kildare.—Morristown-Biller, oval annexe to south, rounded mote, with a slight fosse and on a small stream (O. S. No. 23).

Kilkenny.—Callan. It is 40 feet high, with a flat top, 46 by 24 yards across, and has a small annexe to the west separated from the mote by a fosse. Portnascully (O. S. No. 45).

Wicklow.—Merginstown, crescent annexe, described below (O. S. No. 15).

Wexford.—Loggan (O. S. No. 2). Ardamine (O. S. No. 12). (Figured in *Dublin Penny Magazine*, 1834, p. 146).

Tipperary.—Kilfeakle (O. S. No. 59), 45 feet high, with a crescent-shaped annexe 174 feet across and 19 feet high, deep fosses to north, the whole girt with an earthwork. Dunohill (O. S. No. 59), described below. Tipperary (O. S. No. 57), 43 feet high, with a side annexe 31 feet high, surrounded by lofty rings and deep fosses. Knockgraffan (O. S. No. 77), 55 feet high, 60 feet across top, 193 feet through base; it has an irregular annexe with a defaced fosse 49 feet wide; on it are fragments of a castle built A.D. 1192.*

Limerick.—Kilfinnane (O. S. No. 56), described below.

Waterford.—Lismore (O. S. No. 21), crescent annexe, described below.

Typical Examples:—

135. *Dundermot, County Antrim* (O. S. No. 27).—A large flat-topped mote 60 feet by 30 feet across. The base is surrounded by a deep fosse, and south of this, but also surrounded by a fosse is a somewhat crescent-shaped annexe, locally called "the Parade." A sunken way or trench seems to have led to a spot near the bridge over the Ravel. *Description*—H. Monck Mason, "Statistical Survey of Antrim," vol. i. Illustration.

136. *Downpatrick, County Down* (O. S. No. 37).—This truly great earthwork is the Rath celtchair of our ancient records; it measures 2100 feet in circumference, and its rounded mound is 60 feet high. It is surrounded by three ramparts 30 feet wide, and measures three-

* Attributed to Rafann, foster-mother of Fiacha Mulleathan, king of Munster.

fourths of a mile within the circuit of the earthworks. *Description*—No full description has been published, but good views appear in Molyneux' "Danish Mounts" (1725), and Archæologia Cambrensis. See also Journal, R.S.A.I., xxi. (1891), p. 582. Figure 26, *supra.*

137. *Dromore, County Down* (O. S. No. 21).—Another very typical example closely resembling that "Hausburg" of Stonegg in Hungary, already described. It consists of a flat-topped "mount" in two slight stages, which measures 650 feet in circumference at the base, and is 60 feet across the summit, and rises 44 feet (or 40 feet as in map) above the field, and about 80 feet (slope) from the bottom of the fosse, on the slopes next the river. A square annexe adjoins it to the south, measuring about 80 by 90 feet across. It has a triple earthwork with fosses, 10 or 12 feet wide to the land side. The annexe abuts on a precipice, and from its south-east corner a sunken way 260 feet long, 7 feet wide, and 9 feet deep runs down to the Lagan. *Description*—"Ancient and Present State of the County Down" (1744), p. 216, with plan and illustration.*

138. *Crown Mount, County Down* (O. S. Nos. 46, 47).—The Crown Rath or Crown Mount is another large mote 579 feet round the base, and 63 by 27 feet across the top, the fosse is 21 feet wide. It has a square annexe 130 feet along the side, and a sort of sunken way as at Dromore. Tradition says that two "pretenders for the crown" fought out their quarrel in the annexe. *Description*—"Ancient and Present State of the County Down," p. 218.

139. *Clogher, County Tyrone* (O. S. Nos. 58, 59).—The residence of the princes of Oriel and a site of pillar worship. It lies within the grounds of the Bishop's Palace. It consists of a high mound with a semi-circular small annexe to the south, and a larger enclosure of irregular oval plan, protected by a deep fosse on the west and east; in the south of the annexe is a cairn or tumulus with a raised earthwork.

140. *Greenmount, County Louth* (O. S. No. 15).—This mote when Wright first sketched and described it in "Louthiana" in 1758 had a lofty conical mound with rounded top occupied by a large tree, and a high mound, and deep fosse round a D-shaped outer enclosure ("Louthiana," plates 10 and 11), but now only a few traces of the outer work remain to the north-west. Tradition, in 1758, said it was the place of the first Irish Parliament, and this story was repeated at any rate in 1870. It rests on rising ground (not a hill as stated by Wright) about 150 feet above the sea, and the old peasantry call it Drum cha (Drum há), the ridge of battles. The mount is 210 feet round, and 12 feet high, the slope seems to have been continued down the fall of the ground, so as to be at one point nearly 70 feet long. The old earthworks were about 105 feet long. In the mount was a long souterrain roofed with slabs, and 5 feet high by 3 feet 3 inches wide; in it were found a bronze celt and harp peg, and a plate, with interlacing, and the words "Domnal Selshofoth a soerth Theta" (Domnall seal's-head owns this sword or trapping) in runic letters. *Description*—"Louthiana," p. 9, plates 10 and 11; Major-General J. H. Lefroy, Journal, R.S.A.I. xi. (1871), p. 471.

141. *Killaney, County Louth* (O. S. No. 10).—The mount is 60 feet up the slope, and the top platform is about 40 feet in diameter and 130 feet above the sea; an octagonal building

* Figure 26.

once occupied the summit, and paths lead up to it from the annexe, which is an irregular square once enclosed by an ancient wall, and is girt with a fosse and outer earthwork which nearly abuts on the stream. It lies near the western border of Louth.*

142. *Donaghpatrick, County Meath* (O. S. No. 17).—A large rounded mote 20 feet high, with a large "crescent" shape annexe, to the south, 200 feet across. The annexe is separated by a shallow fosse from the mote, and outside them are three deep fosses with large mounds between, and respectively 10 to 12 feet, 13 to 15 feet, and 8 feet deep, and about 10 to 16 feet wide. The whole is richly planted with laurels, and the fosses on the eastern side are levelled, and measure about 400 feet over all. The Annals of Ulster record A.D. 745, "Dragons were seen in the sky. The forcible entry of Donaghpatric, and seven prisoners crucified." (Perhaps "tortured.")†

143. *Portnascully, County Kilkenny* (O. S. No. 45).—This mote is 50 feet high, 126 feet diameter at the base and 24 feet at the top. It has an oblong annexe to the east, 470 feet across, and an earthwork with a flat top and a fosse 10 feet deep.

144. *Merginstown, County Wicklow* (O. S. No. 15).—A small mote to the south-east of Dunlavin; it has a high mount and low platform, or annexe somewhat crescent-shape. To the west end, in the adjoining field, were found small cists containing crouching skeletons with their heads on their knees, and with clay vessels beside them; another group of burials had entombments without cists, and the bodies lying north and south. It is noteworthy that in each case the axis of the burial lay towards the mote, as in the case of the forts of Bosnia-Herzegovina. One cist was removed by Mr. Mahony to Grange Con, where the enclosed urn is also preserved. At the gate of the paddock, near the mote, was formerly a cupped stone.‡

145. *Loggan County Wexford* (O. S. No. 2).—The mote consists of a high mound, with a platform to the south, ringed in, about 15 feet high, by an oval rampart and fosse. To the south-east was a pillar, near which an urn was found, also three cists with bones and urns. Five hundred feet southward from the mote lay a group of cists with skeletons, and near a hollowed mound were found two urns with ashes and miniature urns inside.§

146. *Dunohill, County Tipperary* (O. S. No. 59).—A large conical mote, over 30 feet high, visible from the railway, and capped with a lofty fragment of the castle, built 1192. It is 642 feet in circumference at the base, and has an annexe, an irregular square, crowded with foundations of buildings belonging to the castle; the earthworks and fosses much defaced.†

147. *Kilfinnane, County Limerick* (O. S. No. 56).—A conical mote, 30 feet high, 50 feet diameter at base, and 20 feet at top. It is girt with three fosses and earthworks. The fosses are (inner) 18 to 20 feet wide, with outer work, 16 feet high; the next, 10 or 12 feet wide, with ring, 13 feet high: the next fosse, 12 feet wide, and outer earthwork, 10 feet high; the outer ring is 2000 feet round. The short notices of it say that it had seven ramparts; but we did not observe traces of some of these in 1877; it was carefully measured by John Windele.†

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* R.S.A.I., vol. xix., p. 88. "The Motes of Iverk," by Dr. James Martin. † Figure 26.

‡ From Notes by Mr. George H. Kinahan. Read before R.I.A., 1901.

§ From same Notes.

148. *Lismore, County Waterford* (O. S. No. 21).—The ancient Dunsginne, or Maghsgiath, stands on the edge of a steep slope near the Blackwater, and is thickly planted. It consists of a lofty conical mote, with a flat top, divided by a fosse from a "crescent" shaped platform lying to the south; the whole girt by a fosse, irregularly oval in plan, with a slight mound outside. *Description* and plan in Journal, R.S.A.I., vol. XXVII. (1897), p. 272. Figure 26, *supra.*

149. **Long Entrenchments.**—These remarkable works are found in Longford under the name of "Duncladh;" in Armagh and Down under the name of the "Dane's Cast"; in Cavan as the "Worm Ditch"; in Waterford and also in Limerick as the "Rian Bo Patrick" and the "Cladh dubh," which ran from Waterford into Cork at right angles to the "Rian Bo"; in Kerry the "Cladh ruadh," which ran into Limerick; and the "Rathduff," on the borders of Kilkenny and Carlow. The southern works are much more slightly marked and less authenticated than those of the north.

Such defences also occur both in Great Britain and on the Continent; one of the former, "Offa's Dyke," is actually called "clawdd", like the Irish trenches.* This great earthwork was probably only repaired by the Prince whose name it bears (A.D. 760–790). The great "Devil's Dyke," in Cambridgeshire, is in places 90 feet high and 18 feet wide on the top. It is named in the Anglo-Saxon Chronicle in A.D. 902; and admirers of Kingsley will remember the picturesque use made of this earthwork in the story of the escape of Hereward from King William's palace. Parallel to this entrenchment, but seven miles to the westward, is a similar work, the "Fleam Dyke." In Scotland, several such works occur such as the "Catrail" at Allan water and "Herriot's Dyke" and the "Devil's Dyke."

The most celebrated works are of course those thrown up by the Romans "across the waist of Britain"; and we may recall how Cæsar had long before constructed a mound and fosse from Lake Leman to Jura to check the advance of the Helvetii. The Danewirck, dug or reconstructed by Queen Thyra across Denmark in A. D. 808, is of similar nature. Also the great earthwork near Kertch, on the Black

* The name is also found at the promontory fort on St. David's Head, "Clawdd y Milwyr," or "Warrior's Dyke"—"Archæologia Cambrensis," VI., ser. IV. (1875), p. 86.

Sea.* The Irish works are scarcely "defensible"; a clue to their purpose might perhaps be found in "the second battle of Moytura," where the "track" of the Dagdae's fork leaves a furrow as large as "the boundary ditch of a province,"† were it not that they are too large and obstructive for simple mearings.

150. *The Dane's Cast, Down*, &c.—The most remarkable early earthwork in Ireland is the great "Dane's Cast." It may be seen beside the railway from Newry to Scarva, in Down. It commences at the stream between the townlands of Lisnagade and Scarva, and cannot be traced to the north of the rivulet. In Scarva it consists of two mounds, 40 feet apart, with fosses 8 feet wide and 6 feet deep; the mounds, 4 feet above the fields, and measuring 54 feet over all. On O. S. map, No. 33, it runs up to a low knoll of rock, 300 feet wide, and fortified on the east side by a low wall, and ends near Lough Shark, on the border of Armagh. It re-appears to the south of the lake, and continues past Poyntzpass to a drained lake. The "Cast" next passes into Armagh, turning westward, and is cut through by the two railways from Newry and Dublin (O. S. map, No. 29, Armagh). It re-appears to the south of Camlough, to the west of Newry, and then it curves round, past the lake and mountain, to Meigh, near the border of Armagh and Louth, some 16 or 18 miles in all. Other portions of earthworks attributed, but doubtfully, to the "Cast," occur near Newtown Cottage, and to the south-east of Armagh town. Mr. Lett regards the work as having possibly been made to hold back the Ultonians, who had been pressed back into Down and Antrim by the wars of King Muredach, son of Fiachra, aided by the Collas, about A.D. 322. O'Donovan considered it to be the bounds of the district of Uriel, where it touched the hostile land of Clan Rughraide; he traced it at Scarva and Creggan—the latter some eight miles from the traces at Camlough. He thought he had found other traces at Carrickmacross, in Monaghan, and northward in Farney and Dartry baronies, and fancied that the "Worm ditch" and "Duncladh" were portions of it; but this theory would imply field-works 50 to 100 miles in length, and would necessitate a belief in such persistency of purpose in a transparently useless work as would certainly be more characteristic of the Chinese than of the Irish. The Cast is locally attributed to the formidable "Black Pig," which not only threw up trenches, but excavated whole valleys in Ulidia. *Description*—The Cast has often been noted; but the only detailed and careful description, with a good map, is by Rev. W. H. Lett and R. J. Berry in the new Ulster Journal of Archæology, vol III., pp. 23, 67.

151. *Cladh na Pieste*, or *Worm Ditch, Cavan* (O. S. No. 31), is a curved entrenchment, about a mile and a-quarter in length. The cladh is attributed to one of those alarming serpents, or piasts, which once (according to tradition) must have made this now snakeless island of thrilling interest to early naturalists. It commences in Ardkillmore, starting from a ring-fort.

* The Danewirck ran from sea to sea. Olaus Wormius describes it in "Monumentorum Danicorum Libri" (1643). Lib. I. "munimentum hoc validius ac firmius multo aggeribus et fossis redidisse."—"Antiquities of Kertch and researches in the Cimmerian Bosphorus" (1857): Dr. D. Macpherson.

† *Revue Celtique*, xii. (1891), p. 87.

152. *Duncladh*, Longford, is about five miles long (O. S. map, Nos. 6, 10, 11). It commences near a fort at Lough Gowna, and, though much defaced, forms the bounds between Dring and Ballinulty. It passes through Clogh as a double rampart with fosses, and becomes the boundary of Aghnagarron and Tromra, passing about a mile to the north-east of Granard. It bounds Carragh and Ballinrud, cuts through Cartronbore, bounds Toberfelim, and passes through Tonymore north as a well-defined double mound to another ring-fort about a quarter of a mile from Lough Kinale. It varies in height from 7 to 16 feet, and is attributed to the "Black Pig," which is said to have been slain at Ballinamuck or Swinesford near it.

153. *Cladh Ruadh, the "Cleeroe," Kerry.*—It can now be traced only from near Cahercarbery cliff fort, on Kerry Head (O. S. map, No. 13), south-eastward and equidistant from Ballyheige Bay. Slight traces re-appear to the east of Maulin Mountain, and end about 8 miles from Kerry Head. We can find no recent evidence for the statement of C. Smith,* in 1756, that it passed the Cashen river, and crossed over Knockanure Hill into Limerick. Were this true, it would have been about 18 or 19 miles long.

154. *Ardpatrick, Limerick.*—We were shown slight traces of a double ditch to the north of the shattered church and Round Tower of Ardpatrick, in 1877. It was then said to have been made by the horns of St. Patrick's cow, and to have run northward to the Shannon. A line of pillar-stones from Lough Gur to Ludden Hill is supposed to be connected with this line of earthworks and the legend of the "Black Pig." It is called Boherliagan, and marked even on the Down Survey. It adjoins two sites called "Leaba na muice."†

155. *Rian bo Patrick, Waterford.*—This, like the last, is not marked on the maps. It lies to the east of Knockmeildon, and is a double trench, which, like that at Ardpatrick, was attributed to the horns of St. Patrick's cow. Popular belief stated that it once extended from Ardmore to Cashel. Four miles from the former, some traces of a double ditch remain.

156. *Cladh Dubh, Waterford.*—The Cleeduff runs at right angles to the last from Cappoquin past Lismore, along the base of the Knockmeildon Hills westward, into Cork. It is not marked on the maps. O'Donovan considers that these earthworks are ancient forts.

157. *Tradree, Clare.*—Once possessed a work, 7 or 8 miles long; but, so far as we can discover, no trace of it remains. "The Wars of the Gaedhil with the Gaill"‡ states that the Danes "raised a fortifying bank all round Tradree." This, it would appear, was repaired by Sir Thomas de Clare in 1277. "The Wars of Turlough" tells how he made "a broad-based, high-crested rampart, with a ditch running from the stream (Owen na garna) to the sea" (tidal part of the Shannon) in Tradree. It is (on no farther authority) alleged to have extended from Bunratty to Latoon.

158. *Rathduff, Carlow.*—Mercator, in his large scale map of Idrone (west), shows "Raduffe trenche," running west of Duninga and Finnerscourt and east of Shankill church, and forming the bounds of Gowran (Kilkenny) and Idrone down to the Barrow, opposite Kilcrot; led by this, O'Donovan and O'Curry, in 1839, found slight traces at Kellymount Commons which an old man aged eighty remembered as distinct and half a mile long. Other traditions, at other places, said it had existed there a century before (1739). It was locally known as "The gripe (ditch) of the Black Pig."§

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* "State of the County of Kerry," 1756, p. 219. † R.S.A.I., vol. xxxi., p. 375: Mr. J. Grene Barry. ‡ p. 61. § MSS. R.I.A.: O. S. Letters, Kilkenny, vol. ii., p. 254.

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Portnascully Mote.—Dr. James Martin: R.S.A.I., ix., ser. iv.
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That this Bibliography is incomplete is sufficiently manifest, but of other notes and papers on Irish forts, at least in the proceedings of the lesser Irish Societies, it must be noted either that the descriptions are vague and general, or that description is excluded in favour of theory. Even some of the above papers are very slight, but contain facts of importance.

The Ordnance Survey "letters," while containing many masterly descriptions, as a rule pass by the forts with vague notice. Those, for example, of Clare, never (save in the defaced and commonplace Caher on Roughan Hill and the mote of Magh Adhair) being described in detail, while the notes on the mainland forts of Galway and many of the most instructive cahers, notably Fahan, in Kerry, are passed by or only slightly mentioned.

FIG. 27.—IRELAND WITH THE PROMONTORY AND OTHER CHIEF FORTS.

APPENDIX.

MAP OF IRELAND, *showing some of the principal Cahers, Raths, and Motes, and the Sites of Promontory Forts.*

Antrim, . . 1. Dunluce. 2. Dunseverick. 3. Kenbane. 4. Rathlin (Carravindoon). 5. Doonineeny. 6. MacArt's Fort. 7. Conor. 8. Donegore.

Armagh, . . 1. Emania. 2. Dane's Cast. 3. Dorsey Dun.

Carlow, . . 1. Leighlin Bridge. 2. St. Mullins Mote (note the "Rathduffe trench" on border of Kilkenny).

Cavan, . . 1. Kilmore Mote. 2. Worm Ditch.

Clare, . . 1. Caherdooneerish. 2. Moher Fort. 3. Doon hill fort. 4. Ballykinvarga. 5. Feenagh and Lismacsheedy. 6. Mortyclough and Parkmore. 7. Caheranardurrish and Cahercashlaun. 1 to 8. Burren Group. 9. Cahercommaun and Cashlaun Gar. 10. Cahershaughnessy. 11. Magh Adhair Mote. 12. Grianan Lachtna. 13. Bealboruma. 14. Cahercalla. 15. Moghane. 16. Langough. 17. Cahernagat. 18. Donegal. 19. Doonaunroe. 20. Dunlicka. 21. Doondoillroe. 22. Dunmore, Loop Head.

Cork, . . 1. Beare Island; Doonbeg. 2. Dooneen. 3. Doonlea. 4. Toe Head; Doon. 5. Dooneendermot. 6. Dunoure. 7. Dundeady. 8. Galley Head; Doon. 9. Dunnycove. 10. Seven Heads; Dunworley. 11. Dun Cearnmna. 12. Big and Little Doon. 13. Cashel. 14. Caherkereen. 15. Caherdeadha. 16. Cahermoygilliar. 17. Caherbla. 18. Doon, near Blarney. 19. Knockadoon.

Donegal, . . 1. Dun Balor, Tory Island. 2. Duncap. 3. Dooan or Greenfort. 4. Dunree. 5. Dunaff. 6. Dunaldragh. 7. Dungolgan. 8. Dunmore. 9. Grianan Aileach.

Down, . . 1. Dromore Mote. 2. Dane's Cast. 3. Giant's Ring. 4. Crown Mount Mote. 5. Downpatrick Mote.

Dublin, . . 1. Garden Fort, Lambay. 2. Dunsoghley Motes. 3. Duncriffan, Howth. 4. Ballymount Mote. 5. Rathmichael.

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Leitrim,	1. Edentinny.
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Sligo,	1. Cashel Baun. 2. Knocknarea. 3. Deerpark. 4. "Moytura."
Tipperary,	1. Ashpark. 2. Dunohill Mote. 3. Tipperary Hills Mote. 4. Kilfeakle Mote. 5. Knockgraffan Mote. 6. Cashel Group. 7. Rathnadrinnagh. 8. Cooleagh Group.
Tyrone,	1. Mary Gray Group. 2. Clogher Mote.

* It is noteworthy how two roads run straight to this fort, and probably represent old tracks. It is figured in Gough's "Camden's Britannia," vol. iii. Plate xxv., p. 483.

Waterford, . .	1. Lismore. 2. Rian Bo. 3. Cladhdubh. 4. Ballynarrid Doon. 5. Dunbrattan. 6. Green Island. 7. Islandikane. 8. Garrarus. 9. Westtown. 10. Coolum. 11. Doonmore (Shanoon).
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Wexford, . .	1. Ardamine Mote. 2. New Ross. 3. Rathmore. 4. Salville. 5. Donamon. 6. Blackwater Group of straight-sided Forts.
Wicklow, . .	1. Rathnageeragh. 2. Rathcoran. 3. Motamoy. 4. Merginstown. (Rathgel lies east from the last).

In concluding so imperfect a work, as I feel this paper to be (though at present it is beyond my power to make it more complete, save by heaping up descriptions of various other forts, which would scarcely be desirable in an essay like this), it would be presumption on my part to attempt to dogmatise on any of the countless questions connected with the forts of Ireland. My own belief is simple enough, namely, that types of defensive works were originated in eastern Europe by the adaptation of early Greek culture to the wants of less advanced tribes. That these building traditions originated at least 1200 years before our era, and by their simplicity and elasticity held their own till as many centuries of our era had passed away. Practised by many races, and over a large tract of country, they finally died out, like so many other arts, systems, and beliefs, on the farthest bounds of the old world, and the western ocean, among the Irish.

I may notice five points in reference to this paper:—1. The want of uniformity in the "sections"; but even the shortest section contains an independent subject. 2. The repetition of certain facts and quotations, because they have more than one bearing on the subjects in hand. 3. The necessity of grouping the plans has sometimes separated cognate types of forts. 4. The shortness of the Bibliography; for I did not consider it necessary to collect any but definite descriptions of forts, and the bare allusions to these structures in county histories, and even in papers published by antiquarian societies, cannot be classed under this head.*

* The modern county histories treat the forts with even greater neglect than their predecessors of a century ago. The local societies keep to more "popular" subjects.

5. Lastly, the index refers to the sections, and not to the pages, in order the better to maintain the identity of the paper.

I have only the pleasant task left of asking the friendly correction and indulgent criticism of my readers, and thanking the many kind friends whose assistance rendered this Paper less imperfect than it might otherwise have been. As always in these studies I must first acknowledge the help of my relations, Mrs. O'Callaghan, of Maryfort, Colonel George O'Callaghan Westropp, of Coolreagh, the late Dr. William H. Stacpoole Westropp, of Lisdoonvarna, and Mrs. Macdonnell, jun., of Newhall, county Clare, and of my friends Dr. George U. Macnamara and the Rev. John Bolton Greer, in the same county, who by every means in their power, and for many years helped me to collect and revise my notes on the forts of Clare, Galway, and the neighbouring counties. Many other friends have given me valuable suggestions and aid.* I may thank more especially Mr. Robert Cochrane, Mr. James Mills, Deputy Keeper of the Records of Ireland, Dr. E. P. Wright, Dr. Robert Munro, Dr. David Christison, Mr. George Coffey, and Mr. Standish Hayes O'Grady. Dr. Charles Browne and Mr. H. T. Knox gave me some valuable help with the forts of Mayo, for in this field, as in Cork, little has yet been published. I have also to thank Dr. Robert Atkinson for kind help and criticism with regard to certain allusions to the cahers in ancient Irish documents; I must again record my debt of gratitude to the late Dr. William Frazer, and the late Mr. William Copeland Borlase, and acknowledge acceptable photographic help from Mr. Knox, Mrs. Shackleton of Lucan, and Miss Parkinson of Ennis. So wide, indeed, has been my indebtedness that I almost determined to refrain, save in general terms, from thanking those interested in prehistoric archæology, who gave me direct help in my attempt to bring together as a step towards more advanced study, the main outlines of our knowledge of the forts of earth and stone of ancient Ireland.

* The Royal Society of Antiquaries of Ireland most kindly lent the blocks of illustrations of Dorsey, Innismurray (3), Staigue, Moneygashel, Lough Skannive and Carran forts. Mr. Cochrane and Mr. Mills added to their many acts of kindness that of reading these pages for press.

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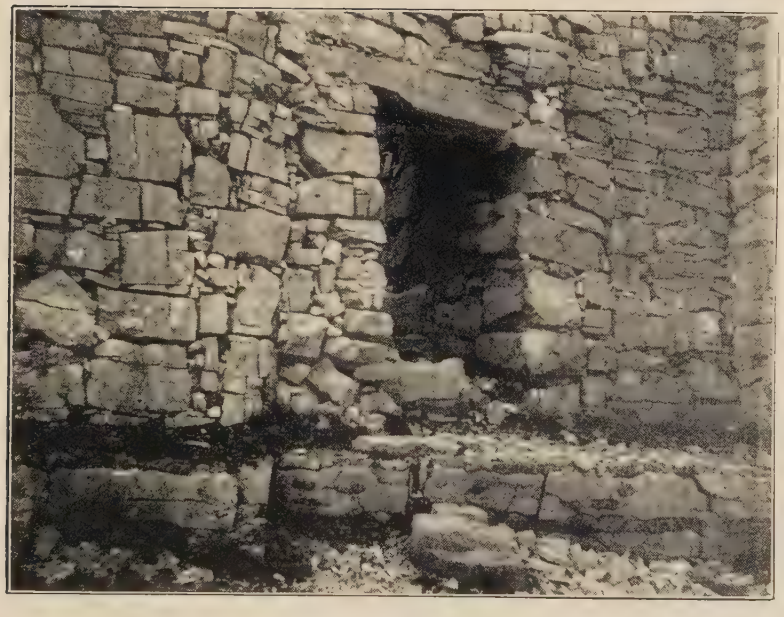
DUN AENGHUS, FROM CLIFF.



DUN AENGHUS, THE DOORWAY.

DUN AENGHUS, FROM EAST.

DUN AENGHUS, THE ABATTIS.

DUBH CATHAIR, ARAN.

DUN CONOR, ARAN.

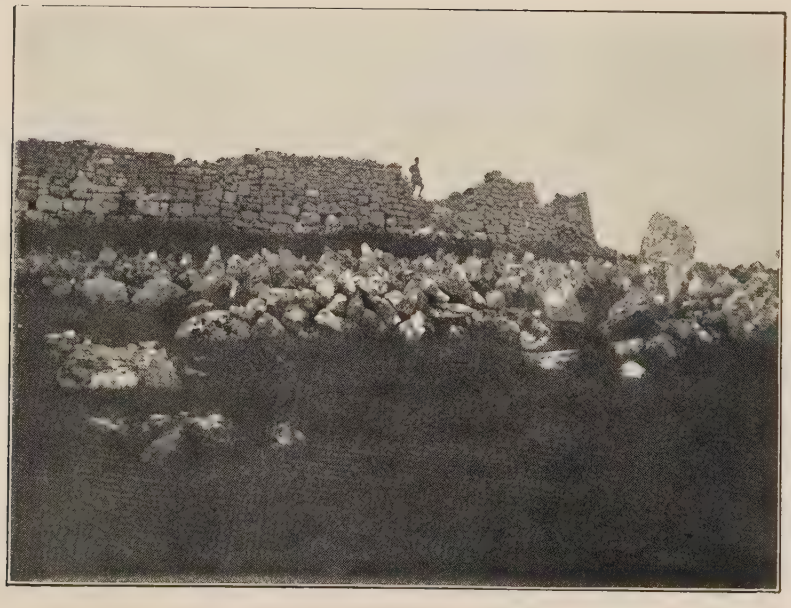
RAMPART OF DORSEY DUN, ARMAGH.

KILCASHEL, MAYO, FROM WEST.

WALLED ISLAND, LOUGH SKANNIVF, CONNEMARA.

CAHERADRINE, GALWAY FROM WEST.

GLENQUIN, CLARE.



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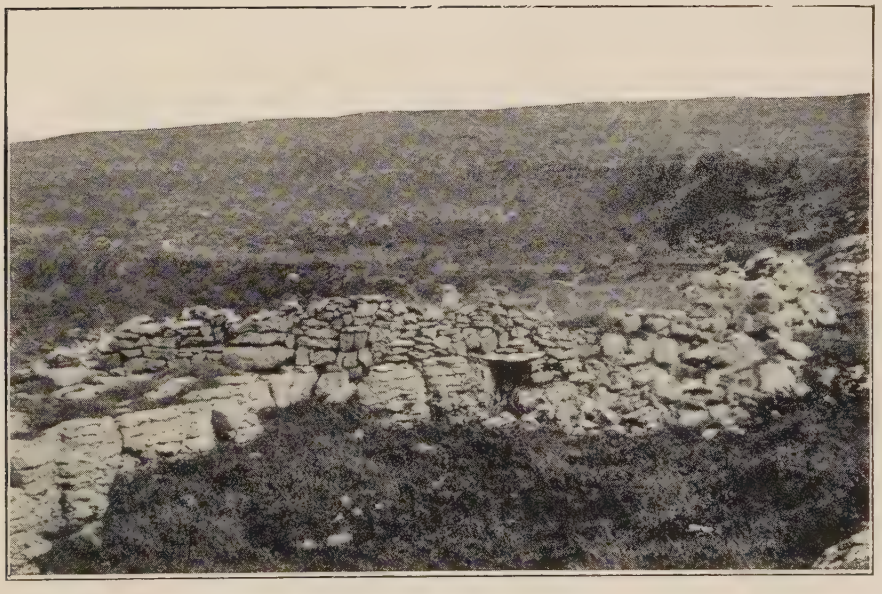
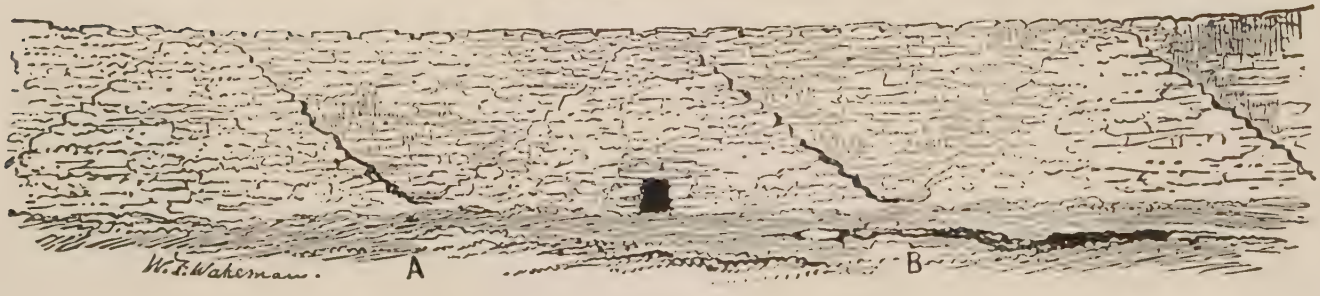


CLIFF FORT, CARRAN, CLARE.

CAHERCONREE, KERRY.

STAIGUE FORT, KERRY.



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November, 1896.]

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By W. T. CALMAN, B.Sc., University College, Dundee.

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Roy. Irish Acad. Trans., vol. xxxi., pt. xi., 1900, pp. 431–472.

Tyrone, Metamorphic Rocks in.
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